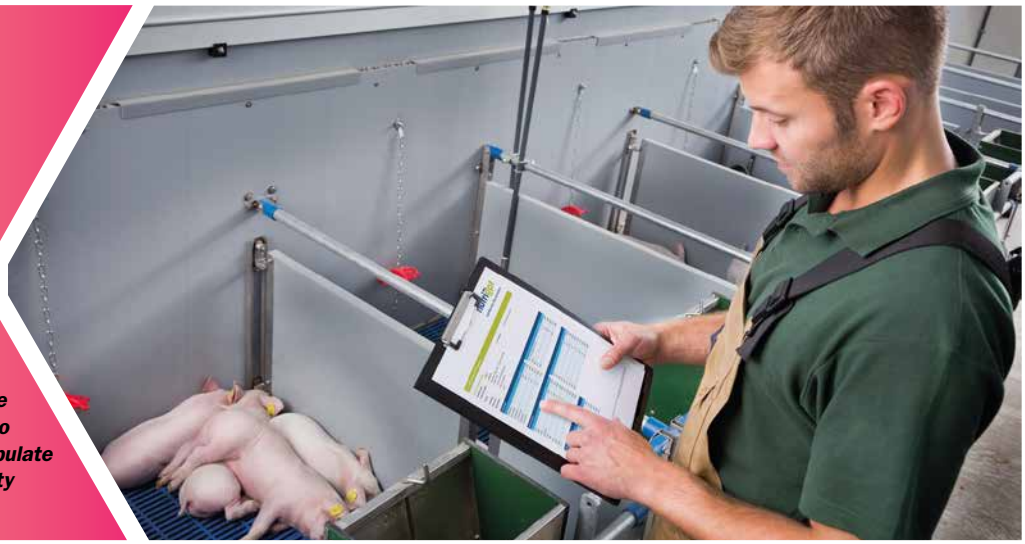
After the ASF crisis: A path forward via high health production



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ASIAN PORK MAGAZINE

Swine producers in Asia stand at a crossroad with serious implications for long-term herd performance and producer profitability. Today's ASF challenge demands aggressive biosecurity measures to bring the situation under control. In this last of a 3-part series on how to address ASF in Asia, HERMAN JANSSEN* writes that in future, swine producers will be challenged to minimize the risk of future ASF outbreaks while maintaining the biosecurity safeguards put in place during the present crisis.

An approach known as 'high health status' production can help swine producers meet production and economic goals while leveraging the benefits of good biosecurity. Successful application of high health status production on the farm begins with farm biosecurity and is amplified with precision nutrition strategies.

Biosecurity

Good biosecurity is essential to the high health status approach of raising swine free of specific pathogens (commonly referred to as SPF animals). Some examples of specific pathogen concerns on the swine farm include the ASF, PPRS, Mycoplasma hyopneumoniae and Actinobacillus pleuropneumonia. Regional challenges also apply. For example, swine farms in Asia are still facing disease challenges long eradicated in Europe such as mound and claw disease and Aujesky's disease.

High health production creates 'germ-poor' environments where animals' exposure to pathogens is minimized. The benefits are worth the effort involved in achieving a high health environment. Particularly in the finishing stage of pig production, high health status swine production has been associated with larger yields, improved feed conversion, higher growth rates, improved uniformity and lower mortality. These achievements all contribute to better margins.

How can farmers implement high health production on their farms – especially in challenged environments such as Asia? In the aftermath of ASF and many other disease outbreaks, the most efficient and secure way to implement a high health status herd is to repopulate using well-adapted animals with a high immunity status and resistance against local pathogens.

Looking at Asia, most swine farmers will likely repopulate their herds with gilts, which offer higher genetic ▷

potential and a higher number of piglets per litter. As piglets are born into higher biosecurity environments, incidents of diarrhea and resulting mortality should decrease. Care needs to be taken with the overall occupancy rate in the barn as high occupancy may create conditions that lead to more stress, increased disease pressure, lower growth rates and less uniformity. Paths to minimize animals' exposure to pathogens must be considered.

A practical and economical approach is required to stimulate daily growth among animals and improve uniformity of the herd. High performance nutrition is the logical pathway when it comes to boosting animal growth and uniformity. But a one-size-fits-all approach to animal nutrition is neither realistic nor practical. Instead, a precision approach to nutrition on the swine farm can support an informed approach to high health production.

Precision feeding – three critical factors

Precision feeding is powered by data which is in turn analyzed by models across all phases of pig production. Analytical tools and models can customize feeding strategies specific to a farmer's production environment, the quality of incoming raw materials, the health status of his herd and marketplace/ economic realities.

A good example of the precision nutrition approach is NutriOpt, developed by Trouw Nutrition. Comprised of proprietary modeling components that can work individually and in combination, NutriOpt integrates economic and scientific metrics with advanced algorithms to calculate animal nutrition decisions. Employing real-time nutritional analytics and technical support, this approach to precision feeding focuses on three critical components of precision nutrition:

Ingredient analysis From a quality control perspective, nutritional matrixes allow nutritionists and feed formulators to determine the precise nutritional value and level of raw feedstuffs, interpret the data and prescribe interventions to meet dietary objectives. Beyond ensuring the ingredients and threshold levels of nutrients are contained in the feed, rapid analysis helps detect the presence of ingredients that could detract from performance and helps assure supplier accountability. Data from the NutriOpt nutritional database is available at the central lab level for comparative purposes, but also in the field for local, real-time analysis.

Data-driven decisions Extensive data in the NutriOpt system compiled from one of the world's largest calibration databases drives a high level of confidence when making formulation decisions. From an efficiency perspective, modeling allows vast reservoirs of data to be converted into highly accurate and farm-specific nutritional strategies. The recommendations are derived from advanced algorithms and based on over a half-century of research and development. And at the end of the day, a team of farm experts are available to apply the data to farmers' unique production circumstances.

Output optimization High precision feeding is more than the sum of the animal feed ingredients. Modeling tools including raw ingredient data, livestock performance metrics, economic market matrices, climate models, genetic strains, and environmental/housing conditions should be evaluated contextually as opposed to viewed as individual factors. This comprehensive analysis can drive a more unified decision incorporating disparate factors affecting nutrition and economics.

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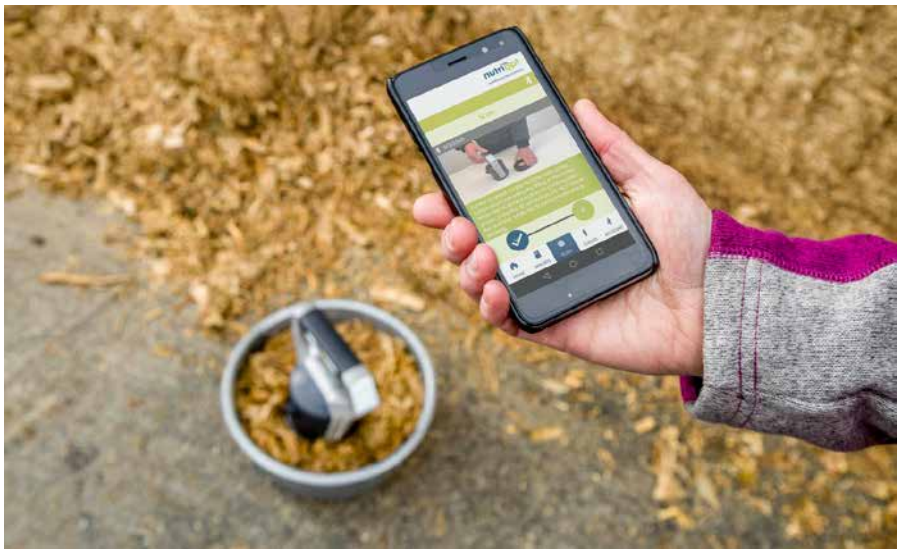

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High health farming as a long-term strategy

Reducing animals' exposure to specific pathogens is an important priority not only for defending against devastating diseases such as ASF,

but to support animals' lifetime performance. As high health farming reduces the average pathogen level on the farm, animals enjoy the ancillary benefits a low-germ environment offers. For example, fewer germs mean less effort is required by animals' immune systems to defend against pathogens. Viewed through this lens, we see that biosecurity evolves from a farm hygiene model toward an economic approach that supports animal health and welfare and producer profitability.

Western European farms that have implemented high health production have shown that reducing pathogens on the farm can translate into significant performance and ultimately economic improvements.

For example, growth in fattening pigs increased from 800-900 g/day to 1100-1200 g/day when the high health production process was employed in the Netherlands. Substantial improvements have also been recorded in key metrics such as reduced mortality and feed conversion. Collectively, these improvements benefit the bottom line. They create more growth per square meter, thus lowering the cost per kg growth and helping farmers achieve profit objectives, even at times of lower meat prices.

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While growth is an important barometer of success, it should be evaluated in context with herd uniformity. When pigs grow at a consistent and uniform rate, less time is spent waiting for small pigs to achieve slaughter weight. Reduced production time translates to less feed, labor and other resources consumed. Time to move pigs to slaughter is reduced while production efficiency is improved. As farmers raise more herds on the farm, they can achieve better economies per square meter of barn/housing space. Collectively, these micro-efficiencies can have a big impact on the producer's bottom line.

When biosecurity is combined with data-driven modeling to inform high-precision feeding, farmers in Asia and production environments around the world can benefit from a higher level of livestock production. AP