

Five Top Areas of Feed Science Advances for 2018

Hog producers across Western Canada can look forward to continued advances in a number of key feed technology areas in 2018, with new options available that support efficiency, performance, profitability, environmental footprint, animal health and welfare, and more.

The wave of innovation is driven by research and development, along with important industry trends such as the shift toward reduced reliance on antibiotics and increasing focus on bio-based solutions such as 'natural growth promoters' (NGPs) and options such as enzymes and yeast-based additives that unlock higher nutritional and energy value from feed.

"We are entering an important new chapter for the evolution of swine industry feed and management practices in 2018, particularly as swine operations adapt to new rules for more limited and judicious use of traditional options such as antibiotics," says Dr. Bogdan Slominski, a leading feed technology researcher at the University of Manitoba. In Canada, the major phase of new antibiotic rules including increased veterinary oversight comes into effect Dec. 1, 2018.

"The good news is that based on scientific advances producers have strong feed technology options that are aligned with the new rules and industry expectations and are very effective to help operations maximize efficiency, performance and overall results."

Multi-carbohydrase enzyme advances lead the charge

One of the most promising areas of ongoing innovation and industry adoption is 'multi-carbohydrase' feed enzyme technology, says Slominski, which is breathing new life into the ability of swine operations to get the most "bang for bite" possible from feed rations. Traditional enzyme products utilize only one or two activities to breakdown the

indigestible components of the feed, but this approach is based on aging science that fails to release the full nutritional value and energy locked in the diet. Top options among the latest generation of multi-carbohydrase enzyme products, by contrast, offer several different and complementary activities with each activity targeting a specific component of the diet. This allows swine operations to achieve a much higher breakdown of hard-to-digest components and maximize the capture of all nutritional value and energy available.

"Multi-carbohydrase is the forefront of enzyme technology today, leveraging our best knowledge from 30 years of research and development," says Slominski. Key benefits include substantial improvements in daily gain and feed conversion ratio. This adds value to feed, reduces potential waste and presents a new way to gain a competitive advantage and enhanced profitability.

Other key options

Other key areas of feed science technology advancement in 2018 include:

Phytochemicals and probiotics.

New generation phytochemical (plant-derived) and probiotic (direct-fed microbials) feed additives are offering a range of benefits for supporting intestinal health and nutrient utilization.

Grain management technology.

New grain management technology options are helping to ensure safe, high quality feed. These options – which include enhanced testing and feed additive options – help protect swine operations from the growing risk of contaminants that threaten the integrity of feed and can pose a risk to swine.

Enhanced yeast technology.

Swine operations can take advantage of new yeast-based options to capture a range of productivity and performance benefits, including options that as NGPs and health-supporting feed technologies offer strong advantages to support the shift toward reduced use of traditional antimicrobials. Top yeast-based feed additives can help supply conditionally essential nutrients for young animals, stimulate positive intestinal development and improve immune system response, boost average daily gain and feed intake, as well as enhance nutrient absorption and gut health.

Certain yeast-based options are also designed to get the most out of livestock feeding approaches particularly during the mid and later phases of production.

Functional fatty acids.

One of the most exciting and promising areas of innovation is within the realm of functional fatty acids, with leading advances in areas such as medium chain fatty acids showing dramatic potential to raise the bar on antimicrobial alternatives and overall feed and performance optimization. Watch for more information on this fast-evolving area in the next article that will be featured in this space in the next edition of *Prairie Hog Country*. •



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