Optimizing bird productivity during heat stress

KEMIN®

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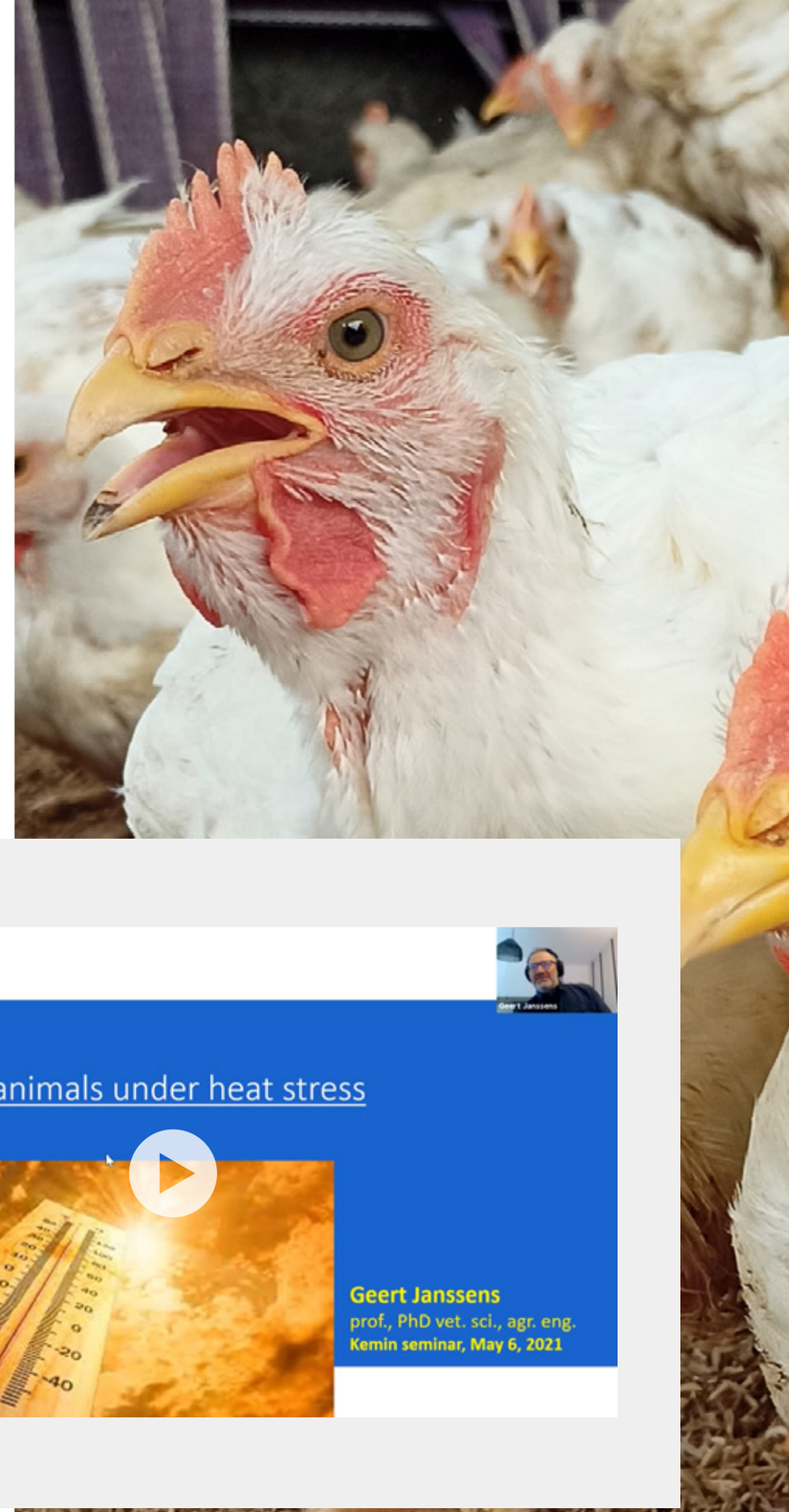
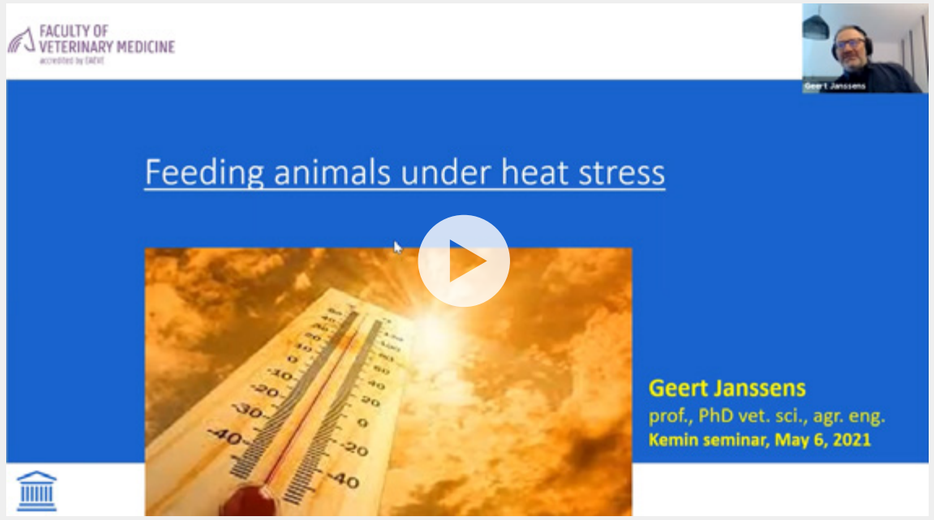


Prof. dr. ir. Geert Janssens works at the Department of Nutrition, Genetics and Ethology at the university of Ghent, Belgium. He is head of the lab, and teaches animal nutrition to the veterinary students.

In this video, he explains the principles of heat stress, impact of heat stress on nutrition, nutrient metabolism, oxidative stress, and gut health:



HEAT STRESS, AN ANNUALLY RECURRING CHALLENGE FOR THE POULTRY INDUSTRY WORLDWIDE

Heat stress is one of the key problems that continues to challenge the poultry industry worldwide. Improvements in poultry genetics for higher production performance and increased lean meat have led to higher metabolic rates: birds consequently produce more body heat, making them increasingly prone to heat stress.

Want to learn more about what causes it, what it does in your birds and how they cope with it? Download our latest e-book on the challenge.

DOWNLOAD OUR BOOKLET

The importance of a multi-factorial, preventive approach

A multi-factorial approach to reduce the effects of heat stress is vital. Implement a nutrient absorption enhancer, an energy efficiency booster and an immunomodulating β-(1,3)-glucan to counteract negative effects on immunity, performance, and meat quality.

Impact of heat stress

- Oxidative stress
- Acid-base imbalance
- Immune suppression
- Neuroendocrine challenges
- Impaired intestinal function
- Vulnerability for pathogens
- Reduced performance

Mitigation of heat stress

01 ENVIRONMENT

- ✓Ensure ventilation and air flow
- ✓Reduce stocking density
- ✓Adapt lighting regimen
- ✓Adapt feeding regimen
- ✓Optimize water intake

02 NUTRITION

- ✓**Feed Quality**
  - Prevention of oxidation
  - Optimizing physical properties
- ✓**Feed formulation and strategies**
  - Increase fat level
  - Reduce crude protein level
  - Optimize nutrient digestion and absorption
  - Feed restriction strategy
- ✓**Support of bird health**
  - Electrolytic balance
  - Vitamins & minerals
  - Enhancing the immune system
  - Pre- and probiotics

Boosting the immune system

Heat is an important environmental stressor that raises cortisol levels and favors immunosuppression, increasing the susceptibility of flocks to disease. β-glucans are known immune modulators, they have been demonstrated to stimulate specific and non-specific immune responses and as such increase resistance to infections and diseases.

ALETA™

Aleta is a unique source of β-glucans, derived from algae (*Euglena gracilis*), which can mitigate the immunocompromising effects associated with heat stress.

BENEFITS:

- Reduces pro-inflammatory cytokines
- Improves meat quality
- Increases body weight gain
- Reduces FCR
- Helps birds to resist stressful conditions

Supporting nutrient absorption

One of the most important considerations in managing heat stress is reducing the bird's own endogenous heat production. It has been well demonstrated in literature that the digestion of some nutrients creates more body heat (heat increment) as a by-product of digestion than others. Protein has been found to produce considerably more body heat per calorie of feed energy, compared to lipids.

LYSOFORTE® EXTEND

LYSOFORTE EXTEND is a unique solution based on 3 active components in a well-defined ratio, to increase diet digestibility and the absorption of essential nutrients in the intestinal tract through significantly enhancing the entire fat digestion process.

BENEFITS:

- Improves digestibility and absorption of fats and oils in the diet
- Increases absorption of nutrients through
- Increases the digestibility and uptake of a wide range of other essential nutrients such as protein, dry matter, AMEn significantly

More pathways to mitigate heat stress

ButiPEARL™

is an encapsulated source of butyric acid manufactured using a proprietary spray freezing process, which allows for targeted release all along the gastro-intestinal tract. ButiPEARL has proven benefits on the adverse effects of heat stress on the intestine, by restoring morphology and performance.

READ MORE

CLOSTAT®

contains a unique, patented spore-forming strain of *Bacillus subtilis* (PB6). It has proven benefits on the intestinal microbiome of chickens during heat stress, ultimately resulting in improved growth and meat production.

READ MORE

Antioxidant solutions

preserve the high energy value of your diet, reduce oxidative stress and conserve essential costly nutrients. They ensure optimal animal performance and carcass quality, which is crucial in every professional and sustainable animal production management program.

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KemTRACE™ Chromium*

is a chromium propionate supplement, a unique, highly bioavailable organic source of chromium to support poultry exposed to heat stress.

**Available in Middle East and Russia*

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Services for our partners

To maintain maximum production results during heat stress, ensuring a profitable, sustainable business, thorough technical knowledge and understanding of available supportive tools is imperative. That's why Kemin not only offers highly efficient, science-based solutions to help you manage this intense challenge, but also close, tailormade technical partnership. To build a successful mitigation strategy, we support you with excellent technical expertise, necessary research insights, with long-term guidance and training opportunities. Kemin's Technical team can help you to design an appropriate strategy. For you as a client, we go beyond the limit to support you and to ensure your success and future growth.

Once you have decided to work with Kemin's heat stress solutions, we stand by your side every step of the way. The application can be tailored to your specific needs and technical expertise, application support and laboratory services are available to you.

Our technical team can help you to design an appropriate strategy, to ensure your success, we work together, in a close partnership, to provide the right technical expertise you need. Partnering with us will ensure continuous guiding based on your needs, in your language and for your growth.

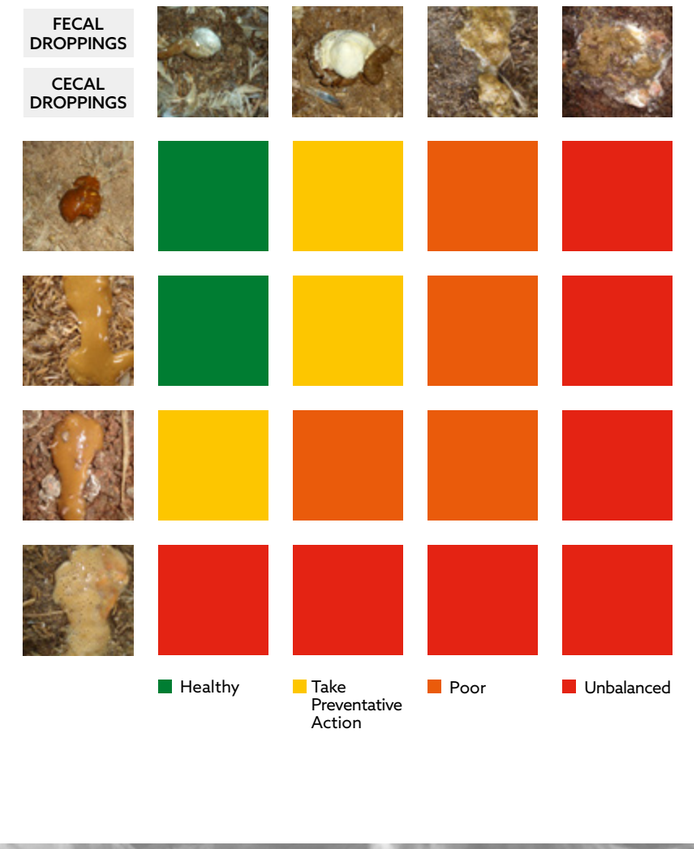
The data driven knowledge, experience, and research insights are available to provide you with support, guidance and training. This will enable a correct evaluation of your challenge, the appropriate solution and approach or implementation. We have access to an international professional network with local specialists to address you in your language and fitted to your specific needs.

For you as a client, we go beyond the limit to support you and to ensure your success.

THE SCIENCE OF AVIAN DROPPINGS

Anticipate and control intestinal health disorders before they take hold on your farm. Examining droppings on a daily basis in the poultry house allows you to identify the first signs of an unbalanced gut.

This chart is intended to be used only as a guide to identify intestinal disorders on the farm.



Want to know more?

VISIT OUR WEBSITE:

- Optimizing bird productivity during heat stress
- The challenge of heat stress
- A complete portfolio to manage heat stress
- An international team of experts

READ MORE:

- Booklet 'Optimizing animal productivity during heat stress'
- Article 'Assessment of the quality, oxidative status and dietary energy value of lipids used in non-ruminant animal nutrition
- Barroeta 2017 ESPN Poster Dietary lysolecithin suppl improves nutrient utilization in broiler chickens
- Wealleans et al 2020b Lysolecithin but not lecithin improve nutrient digestibility performance young broilers
- Papadopoulos 2018 BPS Effects lysolecithin suppl in low-energy diets on growth performance nutrient digestibility viscosity and intestinal morphology broilers

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