



Biocheck.ugent: unique scoring system helps pig farmers to keep both the animals and the farm healthy

The recently published BelVet-SAC Report 2020 shows that over the period 2011-2020 the quantities of feed medicated with antibiotics in the Belgian livestock sector have decreased by 70.4%. At the same time, the use of critically important antibiotics (fluoroquinolones and 3rd and 4th generation cephalosporins) has been reduced by 70.1% and the overall use of antibiotics by 40.2%.



Prof. dr. Jeroen Dewulf, UGent.

Prof. dr. Jeroen Dewulf is chairman of AMCRA, the knowledge centre for antibiotic use and resistance in animals in Belgium, and is also the inspirer of Biocheck.ugent, an online biosecurity scoring tool for livestock farms. We had the chance to talk to him about biosafety, hygiene and awareness: our strongest weapons in the fight against antibiotic resistance.

Jeroen, can you give us an introduction about Biocheck.ugent?

Prof. dr. Jeroen Dewulf: "The idea of Biocheck.ugent sprouted out of the aim to reduce the use of antibiotics by preventing animals from falling ill, as well as preventing farms against the introduction of epidemic diseases such as African swine fever (ASF). Biocheck.ugent is, simply put, an online scoring system for biosecurity on pig farms. Think of it as a school report that allows a farmer to objectively evaluate and enhance biosecurity at his farm. The first version of the biosecurity audit for pigs was made in 2010.

We use a risk based methodology. That is unique. There are other systems available too. Some of them focus on one animal species or on one kind of animal disease. No doubt that each system has its own merits, but no other system uses the same approach as we do in Biocheck.ugent."

What is it that makes this system so unique?

Prof. dr. Jeroen Dewulf: "Well, every risk factor on a livestock farm is assigned its own weight based on its importance in disease introduction and spread. I believe this is the key to the effectiveness of the system.

Biocheck.ugent pinpoints the strengths and weaknesses of the biosecurity measures on a farm very well and gives an accurate insight in the aspects that need improvement to keep the animals healthy. On top of that, the system generates an advice for the farmer. He does not only put data in the system, but he also gets something useful in return."

Belgium's government has recently included biosecurity in the legal framework. What are your thoughts about this evolution?

Prof. dr. Jeroen Dewulf: "There are a number of countries in Europe where an annual biosafety audit is mandatory. Belgium, but also other countries, rely on Biocheck.ugent methodology for this since the European Food Safety Authority has pinpointed Biocheck.ugent as a good tool to investigate and manage the level of biosecurity at farm level.

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Personally, I am very pleased about this evolution. It will allow us to compare results across countries and to identify strengths and weaknesses in biosecurity at the level of the entire meat production sector. Based on this information, we can continue our research and give science based advices on how to optimize biosecurity together with the stakeholders and government.

Hygiene will always be the solid base for everything, for every aspect of animal health, but also in human health. Think of African swine fever, bird flu, but also the covid-19 pandemic. We have to keep on investing - and even raise the bar for that matter - in better and cleaner animal housing, in prevention and in biosecurity."

Biosecurity requires an effort from the farmer in particular. What do you see as the biggest difficulty in achieving a biosecure farm?

Prof. dr. Jeroen Dewulf: "We must all understand that biosecurity is a solid investment, one that pays off really well. A farmer who is concerned about biosecurity is constantly improving his production system, it is a matter of daily attention and attitude. The advantage of improving biosecurity is that you can prevent many different hazards both related to the daily diseases that cause antibiotic use but also related to the threats of the big epidemic diseases. The disadvantage on the other hand is that you do not easily see the effect if you do a good job. We call this the "prevention-paradox": the better your biosecurity is, the lesser you see diseases, and this is something you get easily used to and then you forget the benefit of your biosecurity efforts.

The younger generation of 'Millennial Farmers' is very promising. They seem to have a profound understanding and awareness of biosecurity. Owners of a biosecure farm economize on medical overhead and on the cost of antibiotics use. But the main benefit; in a healthy and more farmer-friendly context they have better production results."

Belgium's first Antibiotics Covenant demonstrated a remarkable willingness from the entire pork sector to strive for a reduction in the use of antibiotics. In your opinion is a completely 'antibiotic free' farming industry possible?

Prof. dr. Jeroen Dewulf: "I really, firmly believe this is possible, but I also believe you should define 'antibiotic-free'. I am convinced that we can eliminate structural use of antibiotics entirely. Under these circumstances, ad hoc use can occur, but limited to one or two interventions per year and per farm. And by 'one or two interventions', I mean treatment of individual animals. Not whole stables or stocks. Most farmers cannot yet do this by tomorrow, but the conviction to strive for it is certainly there."

How long do you think it will take to completely ban the structural use of antibiotics?

Prof. dr. Jeroen Dewulf: "If we stay focused and motivated, I believe we can eliminate structural use of antibiotics worldwide within the next twenty to thirty years..."

However, biosecurity will never become obsolete. It is about much more than antibiotic use, but about containing all infectious diseases. This will always remain a point of attention, and soon embedded in the operational management of each livestock farm."

In more than 60 countries

The Biocheck.ugent system exists for pig farming, but also for poultry and cattle farming and is already being used in more than 60 countries around the world. The system is free of charge.

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For more information, visit www.Biocheck.ugent.be.

