

Interview with HealthyLivestock social scientists in Europe and China



Dr. Carmen Hubbard

Reader in Agricultural Economics and Policy at Newcastle University



Dr. Ming Gao

Vice Director of the Department of Fixed Observation Points Management, Associate Researcher & Doctoral Supervisor of Research Center for Rural Economy, Ministry of Agriculture & Rural Affairs

How to stop producers from overusing antibiotics, given that with antibiotics use the animals get healthy again very quickly

Dr. Carmen Hubbard: Good stockmanship is key to improving animal health and welfare, which in turn could prevent the development and spread of diseases, and so will lead to reduced use of antibiotics. No farmer likes or wants his or her animals to be ill and suffer. An ill or unhealthy animal means a loss of money, both in terms of higher costs and reduced revenues. I wonder if “overusing” is the right word, as I assume that farmers don’t just pop in a pharmacy and buy antibiotics. Somebody, more precisely a vet (or animal pharmacist) prescribes these antibiotics based on a well-established health plan. Our findings show that 98% of pig farmers (out of a representative sample of 600) seek information about the correct dose of antibiotics from a vet and 81% are buying antibiotics from a vet. Some 89% of farmers stipulate that they follow the recommended dose, with only 3% admitting that they use a higher dose than that recommended. Thus, a trusty relationship between the farmer and the vet, working closely together, could help reduce the “overuse” of antibiotics. Hence, in my view, vets, alongside farmers, have an equal and significant role in contributing to the reduction of antibiotics use. However, there are some trade-offs which cannot be ignored when discussing the reduction of antibiotics, e.g., between the use of antibiotics and animal welfare; animal welfare – farm profitability as the delay in the provision of antibiotics or/and insufficient use may cause an animal to suffer longer/die hence also affecting the farmer’s profit.

Dr. Ming Gao: (1) R&D antibiotic substitutes. Develop corresponding antibiotic substitutes to effectively replace the existing antibiotics, and ensure that the effects of antibiotic substitutes can fully meet the needs of farmers at the same time. (2) Strengthen publicity and education. Through positive and negative publicity, make the farming body become fully aware of the problems caused by the use of antibiotics and the advantages of adopting farming methods with reduced antibiotics usage. (3) Take the economic interests of the farming body into consideration. Effectively reduce the risks brought by farming with reduced or low antibiotics usage and ensure that the farming body can obtain good economic benefits in the process of farming with low antibiotics usage so as to increase their participation.

The old farms and old technologies are considered to be mainly responsible for antibiotics overuse. How to help old farms reduce antibiotics use

Dr. Carmen Hubbard: Not sure how “old” is defined here and is there indeed sufficient evidence to support the claim that “old farms and old technologies” are overusing antibiotics? If that is the case, do we know what share these “old” farms account for in the total number of farms and, more importantly, the number of animals they care for? Some farms are likely to be centuries old, but obviously farmers can be young or old. But if “old” farms are a problem then they need to be modernised through either their own resources or government support (e.g., capital grants). But farmers should stop relying on

public support as this entails a financial transfer from taxpayers to farmers (somebody else is paying!). If “old” refers to farmers then they could be encouraged (e.g., through paying them a lump-sum or annuity) to leave the sector if close to retirement. However, for many farmers, farming is a way of life so paying them to exit the sector may not necessarily work.

Dr. Ming Gao: Firstly, we can strengthen technical training. Through extensive technical training, we can popularize technologies for reducing antibiotics and reduce the obstacles and costs of old farms in technology acquisition, and promote the application of relevant technologies.

Secondly, we can strengthen positive guidance and incentive. For farms that actively adopt farming with low antibiotics usage, we can make them into demonstration farms through various forms of rewards, and guide other old farms to actively adopt farming methods that can reduce antibiotics usage.

Thirdly, we can strengthen the supervision mechanism. We can supervise whether the farm still overuses antibiotics in the farming process, strengthen the inspection of the production and circulation of veterinary antibiotics, and improve the management in veterinary antibiotics production and the final usage in farming.

What do you think is the biggest challenge in reducing antimicrobial usage in livestock production and the coping measures in Europe and China?

Dr. Carmen Hubbard: The rule “that one size fits all” farms and farmers across the entire EU. Our survey findings show that there are significant statistical differences between EU farmers with regards to how often they apply antibiotics. Our survey also shows that most pig farms provide antibiotics for a therapeutic purpose (i.e., for the treatment of sick animals) and mostly in the form of injection. Hence, overall, prevention remains a big challenge.

Dr. Ming Gao: Challenge- The farming body’s understanding of the type and technology of farming with reduced antibiotics usage, the technical applicability and cost of new technology, etc.

After a long-term optimization process, the current farming type has been gradually formed and has become relatively stable. Farmers have been quite skilled in antibiotics and can effectively use antibiotics to solve animal diseases and other problems in production. Farmers are unfamiliar with new technologies for reducing antibiotics and are worried about the effects, thus they are quite cautious towards farming with reduced or low antibiotics usage. In addition, farmers are concerned about whether the existing technologies for reducing antibiotics usage are suitable for their own farming situation and the economic benefits.

Coping measures-Training and demonstration of new technologies

Firstly, we can carry out training on relevant technologies and improve farmers’ awareness of new technologies. Secondly, we can improve the applicability of the technology. Based on different farming types, we can develop technologies with good applicability, and combine them to form various “packages”, so that farmers can have more choices. Thirdly, we can promote the pilots of various technologies and farming types with reduced antibiotics usage on a large scale, and promote the general adoption of farming methods with reduced antibiotics usage.