



**Problem:** antibiotic usage in livestock causes increasing resistance to antibiotics in humans and animals. Livestock farmers fear that a reduction in usage will be at the expense of production and yield.



**TO2 Solution:** research by WUR shows that tailored veterinary advice on animal health management in the broiler chicken and pig sectors contributes to a reduced use of antibiotics. Reduction of veterinary antibiotic use by 63% in the Netherlands from 2009 to 2017 showed no evidence of a negative effect on average production and economic results on broiler and pig farms.



**Impact:** since 2009, there has been a reduction of 58% (pigs) and 74% (broiler chickens) in the use of antibiotics due to more preventive animal health management with tailored advice from WUR. So, a reduction in the use of antibiotics has had no adverse effect on the economic results of businesses.

# Less usage of antibiotics, more animal health



WUR

Since 2009, the use of antibiotics in livestock farming declined sharply. Livestock farms feared for loss of production and a deterioration in their competitiveness. Mistakenly, as was apparent from research conducted by Wageningen University & Research at broiler chicken and pig farms.

Experts are surprised that Dutch veterinarians are so reluctant to administer antibiotics. These are prescribed far more frequently in other countries. However, antibiotic resistance, which prevents infections from being combated effectively, is a significant hazard to public health. In livestock farming, antibiotics were still generously administered until 2009. Usage, in the meanwhile, has been reduced by 69%. It was apparent from random testing by WUR in 2019 among 1,500 pig and broiler chicken farms, that this had no demonstrable negative effect on production. This is not only significant news for the Netherlands, but also for those countries that still use many antibiotics, says Ron Bergevoet of Wageningen Economic Research, which is part of WUR.

### Adapting

Not much research has been carried out worldwide into the economic effects of measures that inhibit the use of antibiotics. Relatively simple and inexpensive measures were implemented to restrict broiler chicken producers and pig farmers, says the researcher of animal health economics. For livestock farmers, it mainly meant 'adapting' and learning new animal health management routines. This included paying more attention to hygiene, usage of painkillers, anti-inflammatories or preventive vaccinations as a substitute for antibiotic usage. The biggest reduction (of 74%) was achieved by broiler chicken producers, partly thanks to the introduction of slow-growing broiler chickens with more space per animal and fewer 'teething problems'. Pig farmers achieved a reduction of 58%. A pivotal role was reserved for

veterinarians, who, through their coaching role, offered alternatives by providing each farm with a risk profile and tailored advice on animal health. "Producing healthy animals rather than sick animals, with better results as a consequence."

### Follow-up study

Not all livestock farmers enthusiastically embrace the new policy. It is precisely this group for which we need to conduct additional research to achieve a next step in the reduction. "We know the forerunners are more willing to innovate and see fewer obstacles in the process." But how do you convince farmers who have not yet brought about that reduced usage of antibiotics on their farms? Follow-up research by WUR should reveal how they will participate. ■

**Who:** Wageningen Economic Research, colleges and test locations.

**Duration:** 2019 (one year).

**Budget:** €90,000.

**Follow-up:** projects to further inhibit antibiotic usage, projects involving critical success factors that lead to less usage.