

### Antibiotic Reduction Success

AHDB Pork recently announced that the UK average quantity of antibiotics used on farm has decreased from 183mg/PCU in 2016 to 131mg/PCU for the 12 months of 2017, a large decrease of 28%. This, on top of last years 34% reduction, means that the industry has more than halved its usage in two years.



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In autumn 2017, the sector specific targets taskforce, overseen by RUMA (the Responsible Use of Medicines in Agriculture Alliance) set a sector-wide target of 99mg/PCU by 2020, a reduction of 60% compared to 2015 levels. This latest announcement shows that the pig industry is well on the way to achieving that.

These figures are a welcome validation of all the work done by everyone in the sector, not only in reducing the use of antibiotics, but in proper recording and reporting of the use that is happening on farm.

### Breeding for Disease Resistance

Further advances in technology have allowed scientists to start searching for and identifying parts of the pig's genetic blueprint that make them susceptible to certain diseases. Recently some of these genetic targets have been identified for both Porcine Reproductive and Respiratory syndrome (PRRS), also known as 'blue ear disease', and pleuropneumonia linked to the bacterium *Actinobacillus pleuropneumoniae* (APP).

In the case of PRRS, researchers led by a team in Edinburgh, have managed to breed pigs that have had a protein in the lung, that is targeted by the PRRS virus, removed. When these pigs have subsequently been exposed to the PRRS virus, they have not succumbed to infection with the virus.

A team in Germany have been trying to find areas in the genetic blueprint that are common to pigs that show a higher degree of resistance to developing a pleuropneumonia after infection with APP. So far, three genes have been identified that appear to be involved with the development and subsequent severity of disease. Testing is currently being carried out on farm to see if pigs with these genes have reduced clinical disease compared to those without them and if they perform as well as the current commercial stock.

A recent ruling by the European Court of Justice has classified all alterations of living things, including this latest technological development, as genetic modification which currently excludes them from being used in Europe. While it may be a while before we see these animals available commercially however, these are exciting developments and bring a whole new approach to tackling disease.

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## Erysipelas

Erysipelas is caused by a bacterium, *Erysipelothrix rhusiopathiae*, that can survive for many months in soil and faeces, and can be carried by other animals such as rodents and birds. Most often we see it in adult pigs and finishers but it can infect any pig over 6 weeks of age.

In the acute, very sudden onset of Erysipelas, affected pigs have a high temperature and decreased appetite. They can be dull and may be reluctant to move. The pig's skin and/or ears may show red to dark purple patches and death usually follows 12-48 hours later. The skin can have raised areas that are warm to the touch, and it is these that go on to develop into the classic 'diamond' skin lesions. They usually appear 24-48 hours after onset of clinical signs and are more easily seen on white pigs.

As infection with Erysipelas causes an increased temperature, affected sows can abort. Boars can become sub-fertile for up to 6-8 weeks as a high body temperature will damage the sperm that are undergoing development at that time, and to produce healthy viable sperm again can take 6-8 weeks.

Chronic infection is also possible with Erysipelas. Lameness from arthritis can occur, typically affecting the back legs, making them stiff and more difficult for the pig to get up. The bacterium can also cause the tissues of the heart valves to inflame and become cauliflower-like (endocarditis). This restricts the blood flow through the heart and fluid can accumulate in the lungs leading to clinical signs that look very like pneumonia. Over time, the heart will not be able to cope with the extra workload and the pig will die from heart failure.

Penicillin-based antibiotics are very effective at treating early stage acute Erysipelas and care must be taken to give an accurate dose and full course to try and prevent an acute case from developing into a chronic one. In general, it is recommended that all breeding animals and boars are vaccinated to ensure good herd level immunity.

For more information, check out our article on Erysipelas [here](#)

## Current Clinical Trends – What are we seeing out there?...

As the end of people's straw supplies are being used on farm, we are seeing an increase in skin lesions associated with Erysipelas, along with stiffness in growing pigs. We are also seeing more tail biting in finishers in line with some of the hotter weather.



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**Please do contact your vet with any concerns that you may have**

## Feedback

Please let us know if there is anything that you would like including, or more information on, in a future newsletter.

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