International Pig Topics

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Swine influenza VIII

Costs of the disease

The economic cost of swine influenza is not easy to estimate but various authorities cite figures of between $US 3-10 per animal for influenza or with co-infection(s).

Most of the economic loss is associated with decreased growth, increased FCR, increased mortality and increased medication costs.

Background to control

Control of influenza A virus infection in pigs has become increasingly difficult due to the circulation of more than one, and often several, distinct genetic strains of the virus and the introduction of the 2009 pandemic strain. New reassortment viruses are regularly seen, which means that vaccination with existing vaccines needs to be regularly/constantly under review.

Although the zoonotic influence of these viruses is a relevant issue, the impact of swine influenza viruses on human health is difficult to estimate. Documented human cases include farm workers, people attending live markets and visitors to agricultural fairs. Some 300 cases of people being infected with an H3N2 variant influenza virus were reported in 2012 in the rural Midwest of the USA.

Although swine influenza A virus is not transmitted to man through the eating of pork, reports of pig to man infections or the emergence of a new swine strain of the virus can have a devastating effect on pork consumption. This was a significant consequence of the 2009 pandemic swine influenza virus.

Vaccination

Vaccination is the most frequently used means for controlling influenza infections in swine. Vaccines were originally prepared through conventional means using the predominant classical H1N1 strain to reduce the impact of the disease in breeding and neonatal animals. As the number of strains of swine influenza in the field increased, vaccines have tended to include the most recent and cross reacting swine influenza virus strains.

Although far from ideal, swine influenza vaccines are a valid tool for disease control as they prevent clinical signs, decrease the number of lesions, lower the disease's impact and can control virus shedding from infected animals in the herd. They do not effectively control infection and transmission. These issues are being addressed by the use of multivalent vaccines and autogenous vaccines prepared from the strain(s) of influenza virus on the farm.

More recently, vaccines using live attenuated swine influenza viruses have been shown to give better protection against heterologous strains with reduced viral shedding and the induction of mucosal immunity.