



VIRAL DISEASES

VVD-060

DETECTION OF INFLUENZA A VIRUSES IN SWINE HERDS IN THE NETHERLANDS DURING APRIL TO SEPTEMBER 2017

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The influenza A virus (IAV) subtypes H1N1, H1N2 and H3N2 circulate in domestic pigs at variable rates in The Netherlands. Following the emergence of the human pandemic H1N1 2009 IAV (H1N1pdm), variants of this virus occurred in global swine populations. Here we describe the detection of IAV including H1pdmN1 and H1pdmNx in swine farms in The Netherlands in the period April to September 2017.

Nasal swab or oral fluid samples from clinical cases of porcine flu were sent to the FLI for detection (RT-qPCR), typing and sequencing of IAV.

Results

559 samples from 43 herds were tested. 143 (25.6%) samples and 30 (69.7%) herds were found positive for IAV. The types of IAV identified were (samples positive: S / herds positive H): H1avN1av: S 38, H 12, H1avN2: S 2, H 2, H1huN2: S 4, H 2, H1av/huN2: S 1, H 1, H1av/huN2av/hu: S 2, H 1, H3N2: S 2, H 1, H1pdmN2: S 5, H 3, H1pdmNx: S 1, H 1, HxN1av: S 7, H 1, HxN2: S 1, H 1, Swine Influenza Virus: S 90, H 6.

H1N1, H1N2 and H3N2 are still the majority of IAV that circulate in Dutch swine herds. However, as presented by our group in 2017, sows, gilts, suckling and weaned piglets appear to be highly susceptible to infection with human pandemic IAV strains and their reassortants. These data show that pandemic IAV can be found in swine during the summer period, i.e. outside the human influenza season, and in 4 out of 30 positive herds.

Current European swine influenza vaccines, including IDT's RespiPorc FLU3, do not confer sufficient cross protection against the pandemic strains of IAV. A homologous vaccine against the pandemic Influenza strain (RespiPorc FLUpa H1N1) is now available in selected countries in Europe.