

**RE-INFECTIONS OF PIG FARMS WITH EP AND APP IN RESPIRATORY-DISEASE-FREE REGIONS OF SWITZERLAND - A SEARCH FOR CAUSES**

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The Swiss Veterinary Services are pursuing the objective to eradicate enzootic pneumonia (EP) and *Actinobacillus pleuropneumoniae* (APP) in the entire area of the country using partial and full depopulation strategies. Since the first area-wide sanitation in a pilot area was completed in 1996, the problem of re-infection occurred regularly. The main reason appeared to be the purchase of subclinically infected animals. However, a number of re-infections remained unexplained and a search for possible risk factors was initiated using a case-control study approach.

The objective of the study was to describe and identify risk factors for re-infection in areas with a past sanitation. The analysis was based on the comparison of pig farms that were re-infected in the year 2000 and located in areas sanitised in the years 1996 until 1999 and pig farms that were exempted from re-infection in the same area, i.e. in the same period after sanitation. All farms participating in the study were located in the cantons of Berne, Lucerne and Solothurn. All re-infections of both breeding and fattening farms were registered by the Swiss Pig Health Service. All re-infected farms were elected as cases for the study. A random sample of controls was selected out of the remaining farms in the specified areas. Detailed data were collected using farm visits and a structured interview based on a questionnaire. Information on risk factors related to location, management and animal trade was recorded. A second questionnaire was sent to 212 dealers and transport companies covering topics such as structure, organisation and conduct of transports. These data will be used to investigate a potential association between procedures applied by particular dealers and the number of re-infections in farms serviced by them.

Preliminary results showed that in the year 2000, out of a total of 3,983 farms, 107 farms were re-infected (103 cases of EP and 4 cases of APP) in the selected areas of the three cantons. This resulted in an incidence of 0.1% for APP and 2.6% for EP. Breeding farms had an incidence of 1.7%, mixed breeding-fattening farms 2.4% and fattening farms 3.4%.

The cause of re-infection was identified in 69.2% of all cases. The main reasons were: purchase of animals (43.0%), air-borne infection (22.4%), chronicle infection (3.7%). During the study, 214 farms were visited (107 cases, 107 controls). Preliminary results on the risk factor analysis will be presented at the conference.