

## PSEUDORABIES (*AUJESZKY'S VIRUS DISEASE*) VACCINATION PROTOCOLS IN CHINA

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### Introduction

Pseudorabies (PR) is an endemic swine disease in China (1), notwithstanding there is no official program yet for its control and eradication. Under these conditions, vaccination should be an essential tool for farmers in order to control this disease (2).

The coexistence of other pig diseases in China, such as the recently described PRRS-Swine High Fever Syndrome (3), makes farmers overlook the economic and sanitary importance of PR. A recent study involving Chinese "back-yard" farms (<50 sows) showed that only 25% of them vaccinated against PR (4).

The aim of this survey is to elucidate which are the most common PR's vaccination protocols (VP) and vaccine origin (Local (L) or (Foreigner (F)) in Chinese pig commercial farms, and to evaluate their impact on the control and evolution of this disease in the short term.

### Materials and Methods

95 pig farms from 14 different Chinese provinces were included in this study, from January to November 2007. The farm size ranged from 150 to 3000 sows. Breeder and pig vaccination protocols against PR were collected as well as the sort of vaccine used (gE-/gE+; L/F brand) and the method of application (intranasal (IN) or intramuscular (IM)). Within each farm, blood samples from 5% of the breeders were collected. Serum samples were tested to detect gE antibodies (CIVTEST SUIS ADV gE; Hipra Laboratories) in order to classify each farm as PR-free (the whole sampling was gE-) /not free(one or more samples turned to be gE+).

### Results

All farms included in this study used a gE- live-vaccine type both for breeders and piglets, except for 6 farms where they used a gE+ live vaccine.

In all polled farms sows were vaccinated, but piglets were vaccinated only in 23 farms (24%). Moreover, 33 farms (38%) did not report a special VP for gilts, and 8 farms did not vaccinate either piglets or gilts.

When a special VP for gilts was applied, a protocol of 2 doses before the first mating was more usual (72%) than the one dose protocol (28%).

Sow VP (See Table 1) was based mostly on 3 mass vaccinations (MV) a year.

**Table 1. VP in Sows**

MV*	2	3	4	5
%	20	62	17	1

(\*): Mass vaccinations per year..

In those farms where piglets were vaccinated, the most frequently reported vaccination protocol was a 1 dose programme (71%); followed by 2 doses (26%) and 3 doses (3%). The most usual 1 dose protocols in piglets consisted of 1 dose IN at 1-3days of age (41%) or an IM

dose at 5-6 weeks (27%). The most usual 2 dose VP consisted of a 1<sup>st</sup> dose at 3d IN and a 2<sup>nd</sup> IM dose between 5-8 weeks of age (63%).

In Table 2, we detail results in relation to the origin of the vaccine used in breeders and piglets.

**Table 2. Usage of L or F vaccines**

VP (Breeders/piglets)	F/F	F/L	L/L	F/-	L/-	NI
% of farms	42	16	15	1	21	5

(-): Non vaccinated; NI: no information reported

Finally, when we grouped farms by PR-free/not free, we found that 40% of PR-free farms and 18% of PR-not free farms did not vaccinate piglets.

### Discussion

According to these results, the *standard* PR VP in China would include 3 MV in sows and 2 doses before the first mating in gilts, using mainly F vaccines. In piglets, this would include at least 1 shot IN at 1-3 days of age and an optional 2<sup>nd</sup> shot IM during the nursery period, using F or L vaccines indiscriminately.

Just half of the farms that used F vaccines in sows also used F vaccine in piglets. This preference is caused by the difference in price between L and F. Thus, most Chinese farmers are willing to pay for more expensive F vaccines only for breeders.

A singular characteristic of piglet VP is the very early IN vaccination of animals, at 1-3 days of age. This very early vaccination would aim for a premature active immunity in piglets.

The most relevant fact is that 25% of farms (40% of PR-free ones) do not vaccinate piglets. The main reason for this is the widespread idea that piglet vaccination is not needed in PR-free farms. This, together with other characteristics of PR VP described such as non-vaccination of gilts, applying only 2 MV in sows, using gE+ vaccines, or giving only 1 shot to piglets, deviates from the intensive vaccination programme described as a high-efficacy tool for PR control and eradication (2). Therefore, under these conditions, the control of PR in China does not seem to be likely to be achieved in the near future.

### References

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