

# Introduction of negative gilts to the PRRS virus to a quarantine system in positive farms through the use of modified live virus



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## INTRODUCTION

The production of a farm and its potential depends of the breeding herd performance and adequate managements, which involves the introduction of replacement gilts. Quarantine management has been a cornerstone in the preservation of animal health in intensive production systems. Diseases such as porcine reproductive and respiratory syndrome represent a major challenge in this process of adaptation, affecting reproductive outcomes as well as mortality and animal performance in the production line, <sup>1</sup>for which the use of immunization programs has been implemented as one of the most successful tools. The objective of this study is to evaluate the use of a modified live vaccine for the successful acclimatization of replacement gilts from negative source to the virus, and its incorporation to quarantine in positive farms.

## MATERIALS AND METHODS

The farm where the methodology of quarantine use is described to achieve disease control, can be cataloged as Positive stable(Category II, and it is considered within the subcategory II-A)<sup>2</sup> according to the classification developed by the committee formed between the American Association of Swine Veterinarians(AASV) and the department of Agriculture of the United States. The methodology was developed in a production system of segregated parity of 2,800 gilts, located in the west of Mexico, with a total number of 11,000 sows, distributed in six farms, all with a system of production of three multiple sites. Due to production needs, the negative gilts were introduced in three barns without use in the Site 1 (PRRSpos), which were previously fattening areas. The barns are approximately 30 meters from a late gestation area, so it is considered a high risk procedure. This farms role is to supply replacements gilts to the other farms. At the entrance, the following vaccination program is followed (Table 1). The indication is that at the time of their introduction they are vaccinated with a modified live vaccine, and re vaccinated three weeks later. These females are kept here for a period of approximately 60 days before their introduction to the breeding herd.

## RESULTS

To date, fourteen introductions have been made with a 3 month interval in continuous flow system in the three barns, being able to evidence the entry of negative females to the virus, which after vaccination with MLV, seroconvert and achieve an adequate acclimatization without causing the herd to become unstable, this adds up to the stability promoted by the massive vaccination every 10 weeks in the sows of the positive site one. Table 2 shows the performance of the replacements considering mortality and culling rates.

Table 1. Vaccination calendar

week	vaccine
1	PRRS (MLV)
2	Circovirus Mycoplasma
3	2nd PRRS
4	VIA
5	Blue eye
6	VIA
7	Blue eye
8	Parvo-Lepto-Erisipela
<b>A week prior to service</b>	Parvo-Lepto-Erisipela

Table 2. Percentages of Culling and mortality (January 2015 – September 2017)

Total of gilts introduced	11,896
<b>Mortality</b>	341
<b>Percentage</b>	2.87
<b>Gilts culled</b>	432*
<b>Percentage</b>	3.63
<b>Accumulated</b>	773
<b>Percentage</b>	6.5

\* Culling females, most of them due to selection defects, leg injuries, deformities, lack of tits, lack of development, etc.

## CONCLUSION

The use of modified live virus vaccine is an effective tool for the adaptation of negative replacement gilts in positive receptor systems, homologizing the immunological status and achieving an adequate reproductive performance in both populations.

## REFERENCES

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