

ENHANCED PRODUCTIVITY AND ANTIBIOTIC REDUCTION IN PIGS VACCINATED INTRADERMALLY WITH A PRRSV1 MLV ON A JAPANESE PRRSV2-POSITIVE FARM

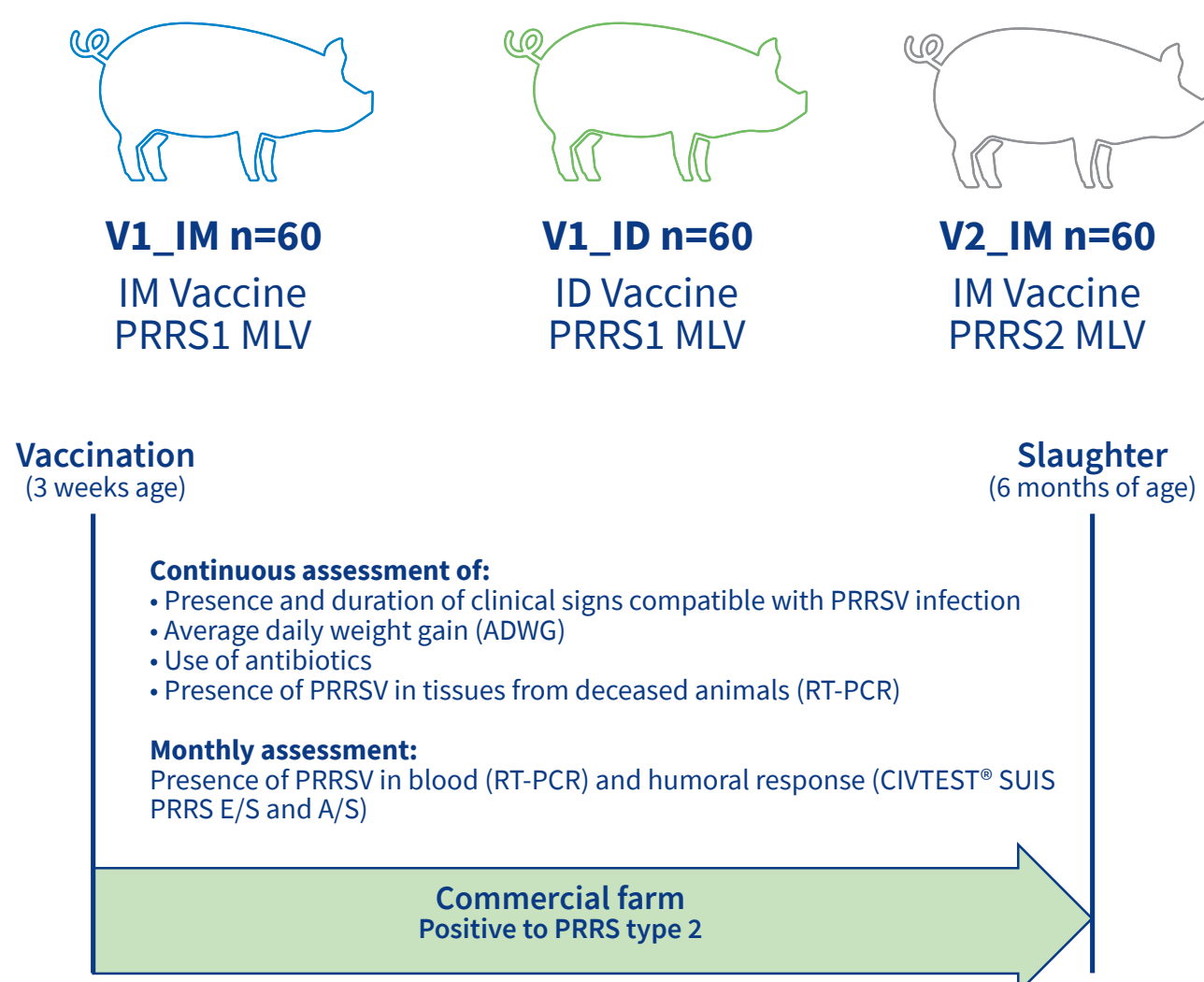
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Introduction

Vaccines can reduce the clinical outcome and productive impact of Porcine Reproductive and Respiratory Syndrome Virus (PRRSV)^{1,2}, with two routes of administration available: intramuscular (IM) and intradermal (ID). Our goal was to evaluate the efficacy of two commercial PRRS MLV vaccines - one based on PRRSV1 (UNISTRAIN[®] PRRS, HIPRA; IM and ID), and another on PRRSV2 (strain VR-2332; IM) - in growing pigs on a Japanese PRRSV2-positive farm.

Figure 1. Experimental design

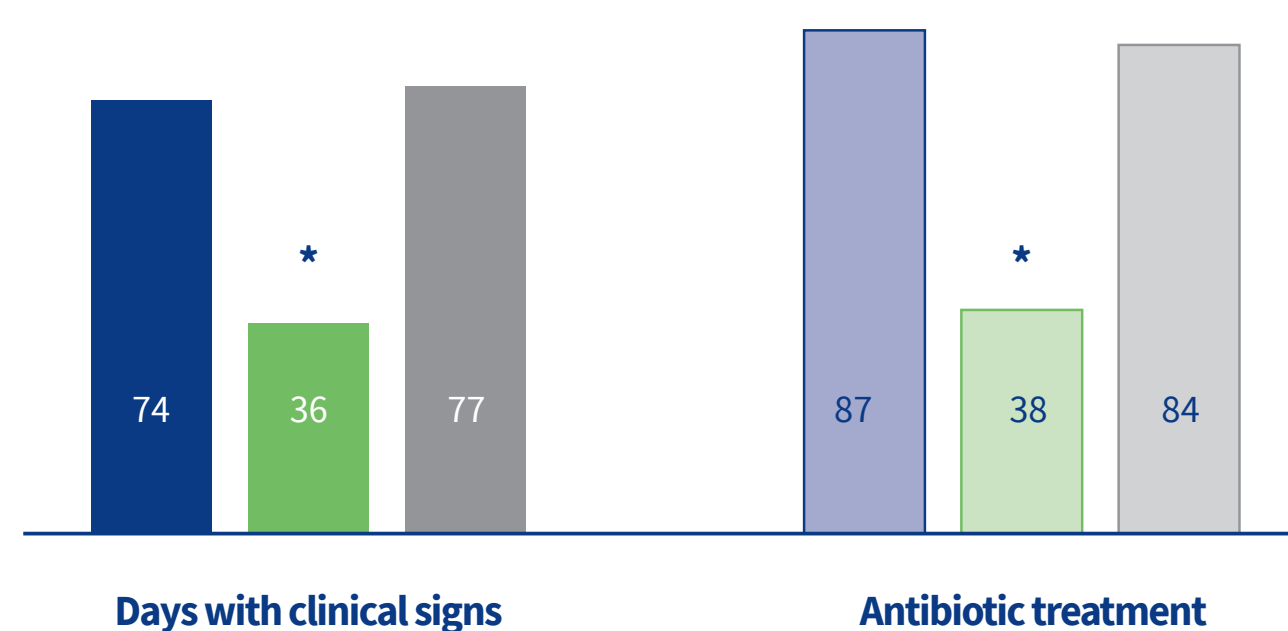


Results

No vaccine strains were found in blood after one month; however, the PRRSV2 MLV strain was found in the lungs of a deceased animal (47 dpv – days post vaccination) belonging to V2_IM.

Figure 2. Figure 2 – Number of days with PRRSV compatible clinical signs (dark bars) and number of days where antibiotic treatment was applied (light bars, cumulative value).

* Group V1_ID (green) had significantly lower values in comparison to the other two groups



ADWG	V1_IM	V21_ID	V2_IM	p-Value
3 to 7 woa†	235.0a	286.0b	234.7a	<0.05
3 woa† to slaughterhouse	328.0	331.1	318.7	ns

Table 1. Average daily weight gain: group V1_ID had a significantly higher growth during the first month after vaccination. †woa – weeks of age

Discussion & Conclusion

Despite the genetic differences, IM PRRSV1_MLV and PRRSV2_MLV provided similar protection on a PRRSV2_positive farm. Conversely, a better outcome was achieved using ID PRRSV1_MLV, suggesting that ID vaccination is an effective strategy for PRRS control. Additional advantages of using the ID route are avoiding iatrogenic transmission of pathogens and less stress and pain³.

Apart from the route of administration, these findings might be explained by the immunological properties of the strains involved⁴ and by the interference with maternally derived antibodies at vaccination⁵, since sows were routinely vaccinated with the PRRSV2 vaccine.

References

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Code assign: IMM-PP-81