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## CONTROL AND STABILIZATION OF A HIGHLY VIRULENT PRRS FIELD STRAIN FROM A 2,400 HEAD SOW HERD USING INGELVAC® PRRS MLV

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### Introduction

A 2,400 sow herd was infected with a new, highly virulent strain of PRRSv in fall 2010. Previous case studies have shown the effectiveness of sow herd vaccination as a tool to control and stabilize sow herds against a field virus.<sup>1,2</sup> This case demonstrated control and stabilization of a highly virulent strain of PRRS using a PRRS MLV vaccination protocol.

### Materials and Methods

A 2,400 head, breed-to-wean sow herd in the Midwest United States became infected with a highly virulent 1-4-4 strain of PRRSv in November 2010. Previous to the infection, sows were PRRS ELISA positive from a previous, unrelated, infection but, both sows and weaned pigs were PRRS PCR negative. Following the 1-4-4 outbreak, a “load, close, and homogenize” protocol was implemented. Cull sows were marketed prior to herd closure. PRRS naive gilts (n=558, 30-39 weeks of age) were loaded into the sow herd on day 0. The herd closed on day 0, 9 days post confirmation of infection. On days 0, 32 and 76 all swine, excluding suckling pigs, were vaccinated with full doses, 2 ml, of Ingelvac® PRRS MLV intramuscularly. Gilts offsite were also vaccinated on day 0 and 32. They entered the site on day 46. Strict internal biosecurity and McRebel™ protocol were implemented along with continued external biosecurity. Serum or tail blood swabs were collected (described in Table 1) from 1 week old piglets, pooled in groups of 5 and tested on PRRS PCR. Subsets of samples that tested positive PCR were sent to a sequencing laboratory and the ORF 5 region of the genome was sequenced. Time to negative period (TTNP) was determined to be the period from day 0 to the first PRRS PCR negative in a series of 4 PRRS PCR negative tests.

Vaccinated gilts (43-49 weeks of age) from an off-site breeding project were entered into the sow herd on day 220.

### Results

The PRRS PCR and sequence results are shown in Table 1.

**Table 1:** PRRS PCR and Sequence results based on days post 1<sup>st</sup> inoculation (DPI)

Date	DPI	# Pos/#Pools (% positive)
Nov 15, 2010	-9	2/5 (40%)*
Mar 2, 2011	98	0/0 (0%)
Mar 15, 2011	111	4/6 (66.7%)*
Mar 29, 2011	125	0/6 (0%)
Apr 18, 2011	145	0/0 (0%)
May 2, 2011	159	1/6 (16.7%)*
May 16, 2011	173	2/6 (33.3%)
Jun 1, 2011	189	2/6 (33.3%)
<b>Jun 23, 2011</b>	<b>211</b>	<b>0/6 (0%)</b>
Jul 6, 2011	224	0/5 (0%)
Jul 20, 2011†	238	0/2 (0%)
Aug 9, 2011†	258	0/2 (0%)

\*Field virus sequenced

†Tail swabs from due to wean pigs

### Conclusions and Discussion

The TTNP was determined to be 211 days. The sow herd has remained stable. Herd closure, vaccination with a full, 2 ml dose of Ingelvac® PRRS MLV on d 0, 32, and 76 of herd closure, and internal biosecurity were able to control and stabilize this herd to the highly virulent strain of PRRSv.

### References

1. Miller B., et al. 2011. 42<sup>nd</sup> AASV Proceedings. p113.
2. Harding A., et al. 2011. 42<sup>nd</sup> AASV Proceedings. p307.