

Comparison of full dose versus partial dose of a modified live PRRS vaccine



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INTRODUCTION

High mortalities are sometimes observed in pigs exposed to PRRSv, even when vaccination is administered. Vaccination protocols at only half the label dose of modified live PRRS vaccine are used infrequently in the field to reduce production costs. Half dosing PRRS vaccine may lead to more variation in the protective immune response to field virus PRRS infections when faced with highly pathogenic strains and/or early exposure compared to a full dose of modified live PRRS vaccine. The objective of the project was to determine if variation in grower finisher mortality could be reduced in a flow experiencing high mortalities by utilizing a full dose protocol of a modified live PRRS vaccine compared to a half dose protocol.

MATERIALS AND METHODS

Two flows experiencing higher than expected mortality in grower finisher pigs located in a hog dense portion of the upper Midwest were identified. Prior to June, all pigs received a half dose of a modified live PRRS vaccine 1 – 2 weeks post-weaning. Close out group data was collected from March through November for these barns. Starting in June all pigs in the same flows started receiving a full dose of a modified live PRRS vaccine 1 – 2 weeks post-weaning. Barn close out data on production performance was obtained. A total of 327 barns given the one half dose of a modified live PRRS vaccine and 136 barns given the full dose of a modified live PRRS vaccine were descriptively analyzed and statistical process control (SPC) charting conducted. Oral fluid (OF) samples were obtained from 100 barns vaccinated with a full dose at weaning, 7 – 8 weeks post-weaning, in the nursery, and 12 – 14 weeks post weaning in the finisher. Sequencing was done on PCR positive samples.

RESULTS

OF results from 100 sites tested revealed 28% of the positive sites to be infected with field virus. Close outs on 327 groups that received one half dose of a modified live PRRS vaccine had a mortality rate of 5.69% from wean to finish compared to a mortality rate of 4.12% on 136 groups that received a full dose of a modified live PRRS vaccine.

Figure 1: SPC Chart % Mortality Flow 1

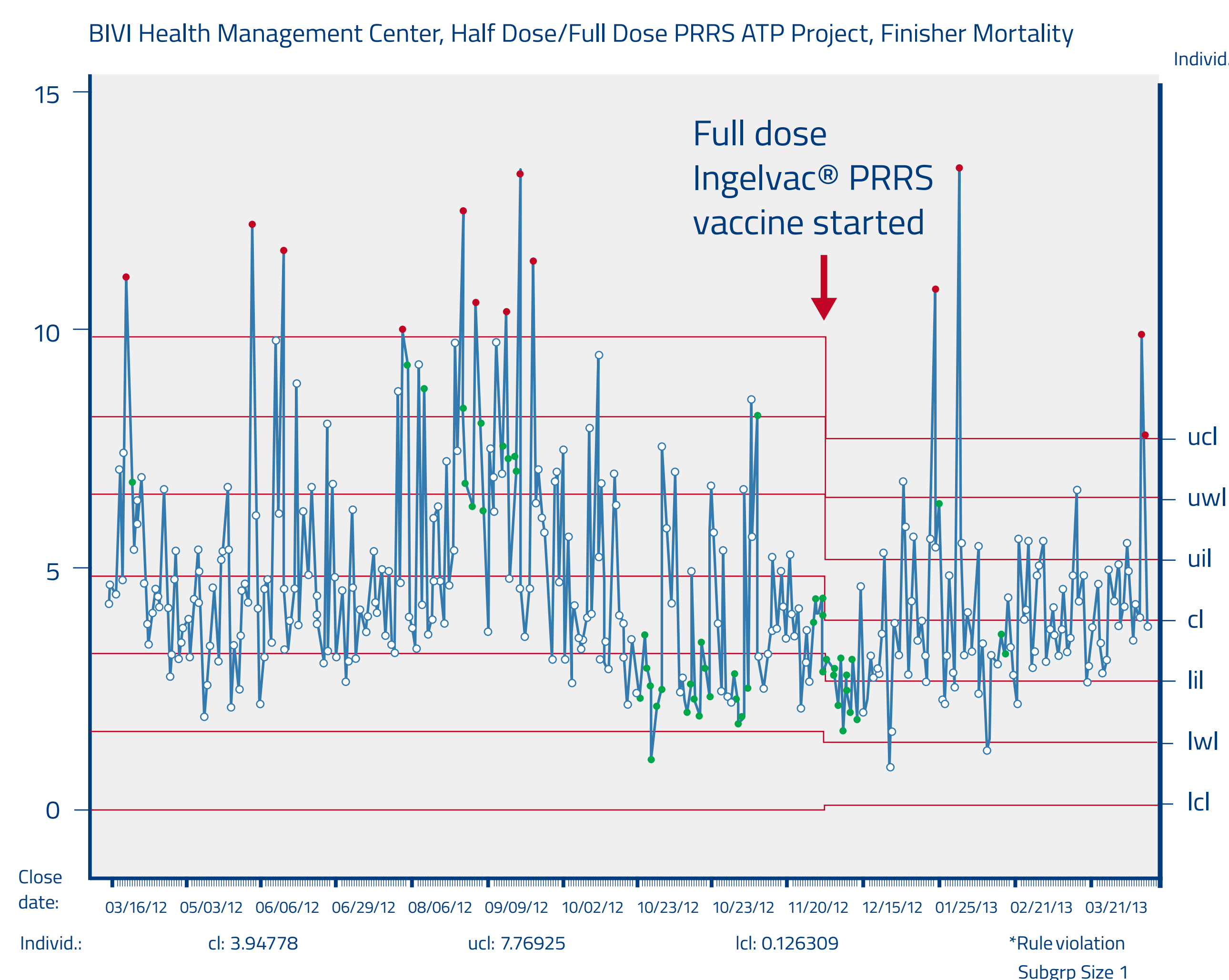


Table 1: Before / After Average Closeout Results

Trt	n	% Mort
Half Dose	327	5.69
Full Dose	136	4.12

CONCLUSION

Groups receiving the recommended full dose of a modified live PRRS vaccine had lower mortality and less variation than prior groups receiving a half dose of a modified live PRRS vaccine. If side by side comparisons are difficult to do, before and after Statistical Process Control (SPC) charting can provide a valuable tool in vaccine decisions when process changes are considered.

