INTRODUCTION

Nowadays, PRRS brings a large economic loss to swine industry worldwide. Vaccination cannot control this disease alone very well. In this study, we applied a systematic method – PRRS 5 Steps Control, to limit the virus prevalence, reduce virus load and economic loss. We also set up a repeatable plan for any future breaks in this production system.

MATERIALS AND METHODS

This genetic multiplier farm is in northwest of China with a 1400 inventory sows raised in farrow to wean style and AIAO model, based on weekly production. PRRSV vaccination program was: 4 times mass vaccination in sows every year; acclimate gilts with sows in isolation house before entry into sow herd. Boars were not vaccinated. An outbreak of PRRS occurred in April this year which mainly caused a decrease on the number of total born and healthy born. Meanwhile there were continuous abortions and weekly mortality of suckling piglets was around 5%. A serial diagnostic program was done:
- Collection of umbilical cord blood, oral fluid, semen, serum of non-vaccinated piglets for a PRRSV RT-PCR test.
- Use of a risk assessment tool (PADRAP) to assess biosecurity.
- Use Statistical Process Control (SPC) to analyze production data.
- Find improvement opportunities in farm management and vaccination program.

Upon investigation, it was found that the onsite gilts, sows, boars and piglets in farrowing house were all PRRSV positive. PRRSV was spreading heavily on this farm. The objective of the Farm management is to control the PRRSV prevalence and make production stable. In order to achieve the goal, we made key plans as following:
- Changed the PRRS vaccine used. Administer whole herd (including boars) Ingelvac PRRSV MLV injections 2 shots 30 days apart, then implement a quarterly vaccination thereafter. Careful focus was given on the monitoring of administration, together with some drugs intervention to make a smooth vaccine transition.
- Changed the parity structure. Cull old sows which are over 7 parities.
- Lab test and monitoring. Test PRRSV every 3 months and sequencing if possible. Before entering the sow herd, positive gilts should be isolated 90 days post vaccination. Stop using sows to acclimate.
- Focus on the biosecurity operations, especially on the truck wash, people restriction and rodent control. Continuous monitoring and correction was done during the program.

RESULTS

Production performance started to recover since June. With a reduction in wild type field virus (Figure 1). Total born and health born rose up. Few abortions are found and mortality of suckling piglets become stable (Figure 2).

DISCUSSION

Because PRRS control is a yearly based program, we will keep monitoring those parameters which are related to production to measure if we have final success. The time of PRRS control program is various depending on constrains including farm size, virus load and wild strains et al., which in the best condition will take a year. The key of a successful PRRS control relies on people’s devotion, their execution matters most. It must be internal driven and meanwhile farm people will devote themselves with passion and persistency during the project.