

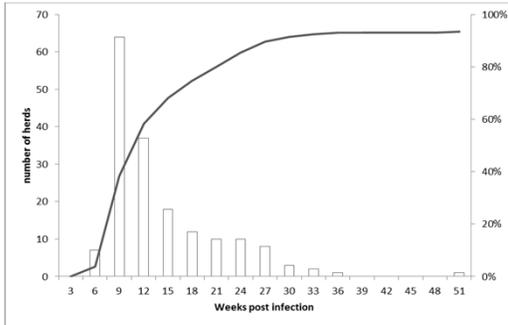
### Time to Baseline Production (TTBP) for PEDv - Key Points

1. Production recovered to approximately 80% of baseline by 8 weeks after infection. However, recovery to 100% of baseline was gradual after that and only 76% (148/195) of herds had recovered to 100% of baseline by 1 year after the break.
2. Net loss averaged 3.0 pigs / inventoried sow for herds that recovered to 100% of baseline. This compares to 2.2 pigs / sow for our earlier study of PRRS impact in 61 herds.
3. Luc Dufresne's program of early weaning, euthanasia, whole herd exposure and vaccination shows promise.

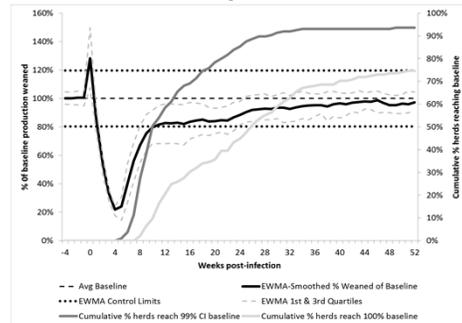
We have 910 herds enrolled today in SHMP. Of these, 863 are sharing PEDv diagnostic results and 454 have had at least one break with PEDv. We have 427 herds that had an outbreak between May 29, 2013 and June 4, 2014 and that have reported achieving stability. For the 195 herds that shared production records, 183 (94%) returned to baseline production as defined by the 99% confidence interval and 148 (76%) recovered to 100% of baseline.

1. The TTBP data (weeks) are not normally distributed. The mean and median (50th percentile) for all these data were 13 and 10 weeks respectively, and ranged from < 1 week to 49 weeks. We also estimate the loss in pigs / sow and compare that across herds. This is highly correlated with TTBP ( $r = +.82$ ). Our net loss was 3.0 pigs / inventoried sow for recovery to 100% of baseline.

Frequency distribution of TTBP



TTBP in 185 herds with original strain of PEDv



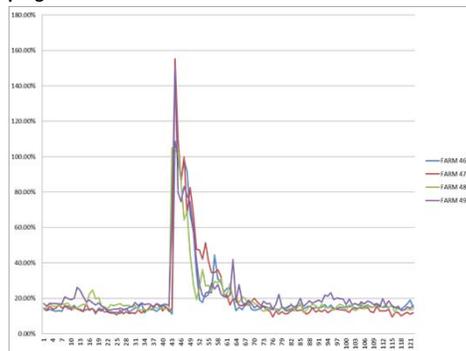
2. You will recall that we follow methods described by Linhares et al (2014) for calculating TTBP. Briefly, we calculate a herd average pigs weaned / week for the 26 weeks prior to a herd becoming infected and call that baseline. We calculate a confidence interval around that baseline number and then follow pigs weaned / week after the break. When the herd crosses the confidence interval, we say that it has recovered to baseline. Interestingly, as opposed to PRRS, we see many herds recover to approximately 80% of baseline and then stall out. So, we added another measure of TTBP; that being recovery to 100% of baseline. By definition, it takes longer to get back to 100% baseline than to cross the confidence interval. The mean and median for 140 herds that achieved 100% recovery to baseline were 21.5 and 21 weeks respectively and ranged from 0 – 51 weeks. Notice that one outlier herd is approximately 12 weeks longer than the next longest herd.

3. Luc Dufresne (2013 Leman Science in Practice award recipient) shared their recent approach for controlling impact. They recently had 10 naïve herds break and did the following:

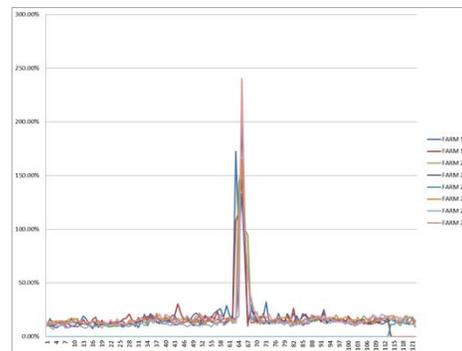
- Wean all pigs that can survive into off-site nursery and euthanize all remaining exposed piglets.
- Expose sow herd to PEDv (Luc used inoculum produced before-hand in controlled setting).
- Euthanize all piglets at birth for 21 days after whole herd exposure (at least 21 days appears to be key).
- Vaccinate the first group of sows where they plan to let the pigs live.

Observations - 100% of herds were non clinical 3 weeks after exposure (meaning the first piglets that were not euthanized did not develop any scour until weaning). Nine of the herds were producing naïve piglet on the first weaning and all herds were producing negative piglet at weaning 8 weeks after initial exposure.

PWM observed in 4 herds with traditional control program.



PWM observed after inoculation, systematic euthanasia for 3 weeks and vaccination.



In future issues, we will examine the trend in TTBP over time, the seasonality of TTBP and the correlation between TTS and TTBP. The TTBP data summarized above are part of Dane Goede's PhD project. We appreciate your participation in SHMP and sharing of performance data. And thanks Luc for sharing your recent experiences.

Bob Morrison