

Time-to-stability update

The objective of this study is to determine how long it takes for a herd to achieve stability (defined by 4 negative PCR testing rounds of >30 litters at least 1 week apart) after initial PEDv outbreak. A second objective is to assess the environmental presence of PEDv in key areas of the barn. To date, preliminary work resulted in 40 total sites enrolling. Thirty-six of these farrow-to-wean sites have reached stability. However, 16 were removed from the study because the first samples were already PCR negative and therefore may not accurately reflect TTS. The remaining 20 stable herds (Figure 1) have an average TTS of 16 weeks (13 wks, 18 weeks 95% CI).

Figure 1 – Stable sites in TTS study (censored or ongoing sites not shown)

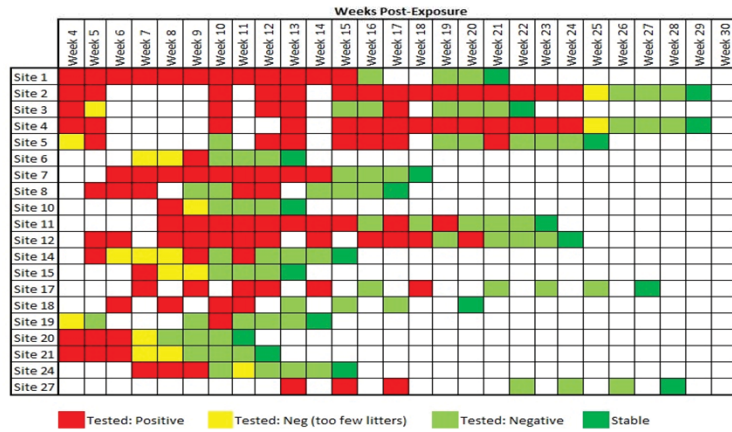


Figure 2 – Environmental samples over weeks 4 – 9 post-exposure by area sampled

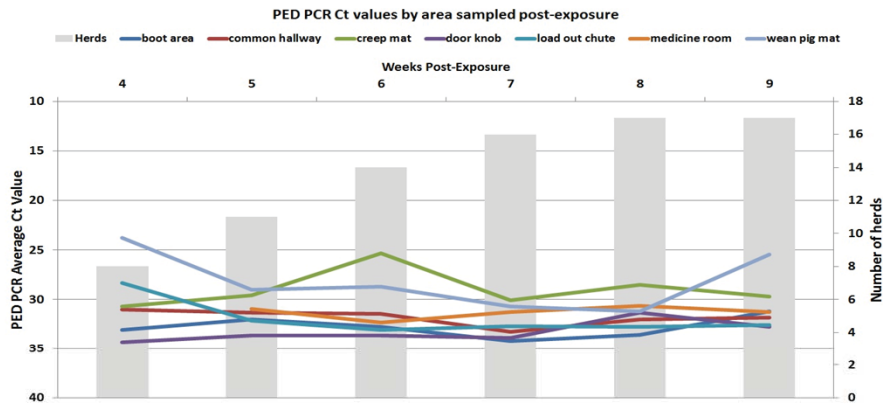
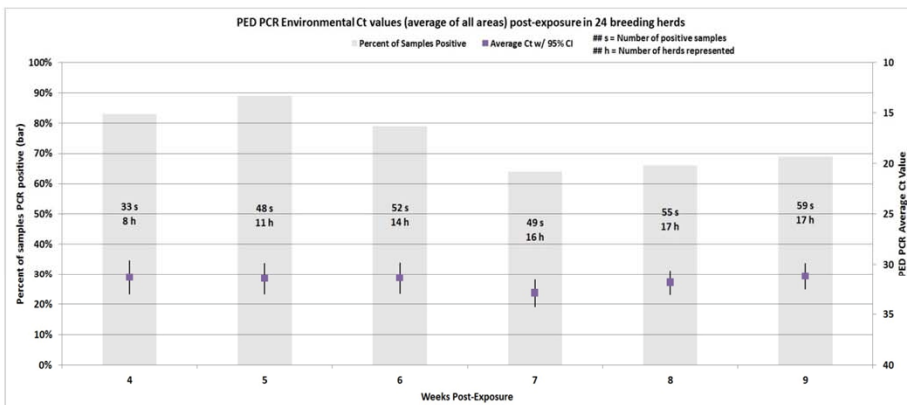


Figure 3 – Aggregate environmental samples over weeks 4 – 9 post-exposure showing Average Ct of all samples with 95% CI



Environmental Swiffer sampling has detected PEDv in the boot area, common hallway to farrowing rooms, creep or young piglet mat, door knob to the farrowing rooms, load out chute, medicine room, and weaned piglet mat after they are loaded (Figure 2). We see evidence of more virus in the farrowing pens (and weaned piglet mats). And we generally observe a somewhat lower level of viral contamination in areas frequented by barn personnel such as the boot area, common hallway, door knobs, and load out chute. This could be the effect of contact points of the barn slowly becoming cross-contaminated by barn traffic/fomites. Also interesting to note is the high level of environmental contamination in early weeks on wean pig mats and in the load out chute. This suggests that these areas may be good focal points for disinfection efforts. The aggregate average Ct of all of the environmental samples indicates that the level of barn contamination does not reduce significantly by 9 weeks post-infection with typical barn hygiene and management in our participating herds.

We want to enroll 16 more herds to meet our target of 40. If you wish to participate please contact Dane Goede (goed0051@umn.edu) or Bob Morrison (bobm@umn.edu) for more information within 1 month of initial diagnosis to begin sampling. There is funding available for limited reimbursement of diagnostics.