

Pork Checkoff Report
Newsletter Article 7/12
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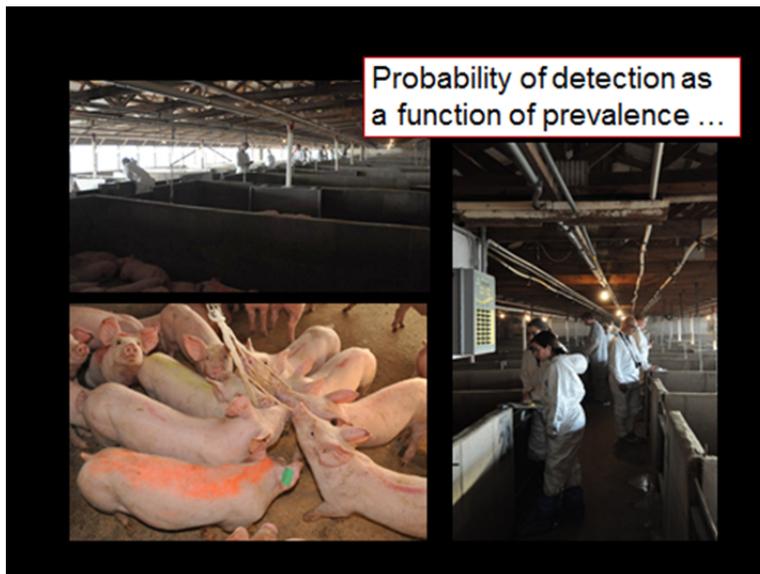


ROPE TESTING: A VALUABLE SURVEILLANCE TOOL

Nobody likes to bleed pigs! With the discovery that oral fluids contain a lot of the same diagnostic treasures as blood, producers and veterinarians have turned to rope testing as a convenient way to sample groups of pigs. Tests are now available to detect both PRRS virus (PCR) and PRRS antibody (ELISA) in oral fluids.

At the recent PRRS CAP Conference in Des Moines, Dr. Jeff Zimmerman from Iowa State University reported on the added benefits of using oral fluids as a non-invasive method for PRRSV surveillance. He explained how a rope sample from a pen of pigs is more statistically significant than a pooled blood sample of randomly selected pigs. Pooled samples are diluted and always result in loss of information regardless of the sensitivity of the test. Zimmerman and colleagues have found in preliminary studies that when 20% of pigs in a pen are infected with PRRSV, there is a 70% chance of finding a positive result with rope testing; when 36% of pigs are infected, there is a 100% chance of detection. In comparison, if one blood sample was taken from each of these same pens, there would only be a 20% or 36% chance, respectively, of detecting a positive.

When graduate students observed pig behavior in pens with cotton ropes, they found that 75% of pigs in a pen chewed on a single rope within twenty minutes of placement. If two ropes were placed in a single pen, 90% of pigs chewed on at least one rope within twenty minutes.



Picture compliments of Dr. Jeff Zimmerman, ISU.

Additional work at ISU has found that mucin, a component of oral fluids in all species, binds or inactivates virus over time. Therefore it is important to submit samples soon

after collection in order to obtain the best results. Furthermore, freezing and thawing compounds the negative effects of mucin, so refrigeration of oral fluids is preferable to freezing prior to shipment.

Order a DVD and poster explaining how to collect oral fluid samples from the National Pork Board. Commercial rope test kits can be purchased or are available through your veterinarian. Contact Dr. Dave Wright (763-242-7535 or wright2us@aol.com), coordinator for the N212 project, for more information about rope testing your herd or the voluntary regional PRRS elimination project.