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Studies Proved R2 To Be Effective In Helping To Control PRRSv In Feed

By Chris Snyder, CEO

As many of you know, PRRSv is an acronym for porcine reproductive and respiratory syndrome virus. It is a severe viral disease causing reproductive failure and respiratory disease in pigs. An outbreak of PRRSv can decimate a herd. It's estimated that the cost of PRRSv to the pork industry is in excess of $664 million per year.

Transmission of PRRSv most commonly occurs through contact between infected and healthy pigs. The disease is spread by body fluids, secretion, boots, etc. Our studies proved it can also be transmitted in contaminated feed.

With the success Feed Energy is having with our **R2** line of products in helping to control pathogens in feed we wondered if **R2** could also help to mitigate PRRSv in feed. So, we asked Mohan Dasari and Mahfuz Abdullah, two members of our Research and Development team, to do a few studies.

The **R2** line of feed ingredients are low pH and low pKa (a measure of the strength of an acid), lipid-based products that are rich in essential fatty acids. In addition, the blend of short, medium and long chain fatty acids have high oxidative stability and have proven antimicrobial properties helping to mitigate Salmonella, E. coli, Clostridia and Campylobacter in feeds.

Mohan and Mahfuz did two studies, one an *in vitro* study and the other an *in vivo bioassay* study at Iowa State University. Both studies used live PRRS virus, but where an in vitro study is done in a laboratory, the bioassay study was done in live animals. The control in both studies were done on both untreated feed and feed contaminated with a stock Isolate of PRRSv.

The results of the *in vitro* study showed **R2** to be effective. The untreated positive control group was positive for the presence of PRRSv. In contrast, the **R2** treated negative control group was PRRSv negative throughout the study.

In the pig *in vivo bioassay* study, the **R2** group were PRRSv negative throughout. All piglets were euthanized and necropsied and the lung tissues were evaluated. Serum and lung samples were submitted to the Iowa State University Veterinary Diagnostic Laboratory for histopathology and immunohistochemistry (IHC) examinations. The lung lesion scores and the lung IHC scores for the Feed Energy **R2** treated piglets were negative throughout the study.

Both the *in vitro* and the *in vivo bioassay* studies proved that pre-treatment of feed with **Feed Energy's R2 products** can effectively render PRRSv contaminated feed non-infectious, mitigating the threat of an outbreak of PRRSv through the feed source. I can speak for the entire Feed Energy staff when I say we were delighted with the results from the **R2** PRRSv control studies. To see the detailed results from the studies just give us call at 800 451-9413 – we would be more than happy to review them with you.

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