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UTILIZING INCREASED RECTAL TEMPERATURE FOR IDENTIFYING AT-RISK SOWS: POST-PARTUM SOW TREATMENT WITH EXCENEL RTU® AND PREDEF 2X®

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Introduction and Objectives

Antibiotic treatment of periparturient sows is common in the swine industry^{1,4}. Due to difficulties in identifying sows in need of treatment, blanket antibiotic use oftentimes occurs. Fever is a systemic immunologic response to tissue inflammation caused by microbial invasion². The objective of this study was to evaluate if sow temperature post-farrowing could be used to objectively identify at-risk animals and thus move toward increased judicious use of antibiotic treatments in periparturient sows³.

Materials and Methods

The trial site was a 2,500-sow farm in central Illinois. Farrowing rooms were alternately assigned to treatment group A or B. In group A every sow was injected at 24 hours post-farrowing with either 3,000,000 units of procaine penicillin G or 1,250 mg ampicillin trihydrate (Polyflex®, Fort Dodge). Treatment choice and follow-up treatment was at the discretion of the farrowing house manager. In group B the temperature of every sow was taken at 24-hours post farrowing. If the temperature was >103° F she was treated with 800 mg of ceftiofur hydrochloride (Excenel RTU®, Pfizer) and 8 mg of isoflupredone acetate (Predef® 2X, Pfizer). If the temperature remained elevated the day following initial treatment, the treatment was repeated. This continued until the sow's temperature was <103° F. The following parameters were measured: number of treatments from 24 hours post-farrowing through weaning, sows that were culled or died for 24 days beginning 24 hours post-farrowing.

Results

Analysis included 925 sows in treatment group A and 913 sows in treatment group B. Group A received 925 antibiotic treatments and group B received 50 antibiotic treatments at 24 hours

post-farrowing (P<0.01). In group A, 94 of 925 (10.2%) sows required subsequent lactation treatments while in group B, 122 of 913 (13.4%) sows required subsequent treatments (P<0.04).

Three consecutive replicates (1 group A, 2 group B) had a clinical hard udder problem and all sows were treated; a fourth consecutive replicate (group A) had a milder problem and 31% of sows were treated. Due to this bias, these 4 replicates were removed and data were re-analyzed. Results indicate that 26 of 821 (3.2%) group A sows and 24 of 815 (2.9%) group B sows required subsequent lactation treatments, thus there were no differences in number of treatments (P>0.7). There were also no differences in sow attrition. In group A, 97.5% of sows were retained in the herd at 25 days post-farrowing and for group B, 96.7% of sows were retained (P>0.3). The number of pigs born alive and weaned was recorded for each sow but could not be accurately evaluated due to cross-fostering between treatment groups. Historically, preweaning mortality in this system was approximately 9% and that did not change during this trial period.

Discussion

In this study sow post-farrowing rectal temperature was effectively used to identify at-risk sows in need of treatment. The Excenel RTU® group received significantly fewer total lactation interventions and treatments at 24-hours post farrowing, while no differences were seen in re-treatments and sows that died or were culled through 25 days post-farrowing. The Excenel RTU® group had economic advantages (Table 2).

References

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Table 2. Cost analysis- lactation treatments

	<u>Treatment Group A</u>	<u>Treatment Group B</u>
24 hours post-farrowing	\$1,445	\$429
Subsequent lactation costs	190	179
Total	$\frac{\$1,635}{925 \text{ sows}} =$	$\frac{\$608}{913 \text{ sows}} =$
	\$1.77/sow	\$0.67/sow