South Dakota State University
Department of Animal Science

Beef Day 2020

Feedlot

Evaluation of bedding application on steroidal ear implant abnormality rate in beef steers

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Objective

To evaluate the effects of bedding application on steroidal implant abnormalities (i.e. abscess, hard, knot, missing, partial, and soft inflammation).

Study Description:

Continental × English beef steers (n = 240; allotment BW = 805 lbs [±49.6]) were used in a randomized complete block design feedlot study to evaluate the effects of bedding application on steroidal implant retention rates. Steers were allotted to 30 concrete surface pens (78 ft^2/steer; n = 8 steers/pen; 10 pens/bedding treatment group) at the Ruminant Nutrition Center in Brookings, SD 36 d prior to being implanted. Pens were assigned to 1 of 2 bedding treatments: 1) No bedding applied (**NO**), 2) 4.0 lbs (as-is basis) of wheat straw bedding/steer/d (**BED**). Steers were also assigned 1 of 3 implants: 1) No implant, 2) Synovex Choice [100 mg TBA + 10 mg E_2; **CH**], or 3) Synovex Plus [200 mg TBA + 20 mg E_2; **PL**] in a 2 x 3 factorial arrangements, main effects of bedding and implants. For statistical analysis of implant abnormality only pens administered CH and PL were analyzed, leading to a total of 160 steers. Ears were not scrubbed with disinfectant prior to implantation, however, large debris was removed from implantation site. Implant status was evaluated by a single trained observer 28 d post-implantation. Pen served as the experimental unit; an α of 0.05 determined significance.

Take home points:

Pen conditions pre- and post-implantation can have an impact on the number of implant abnormalities observed. Steers from NO and BED had similar (P = 0.27) implant abnormality rates (15.18 vs. 7.50 ± 4.726%) for NO and BED, respectively. Steers had similar normal implants rates (P = 0.27; 84.82 vs. 92.50 ± 4.726%) for NO and BED, respectively. Administering implants to cattle from excessively muddy pens can potentially increase the likelihood of observed implant abnormalities.

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Keywords: bedding, cattle growth performance, implant retention