

**365 Evaluating chute-side ultrasound accuracy in market cattle.** J.J. Harlan\*<sup>1</sup>, C.A. Uradahl<sup>1</sup>, G.A. Younglove<sup>1</sup>, S. Harrison<sup>2</sup>, S. Nash<sup>2</sup>, J. Packham<sup>2</sup>, R. Panting<sup>2</sup>, and D.M. Sanchez<sup>3</sup>, <sup>1</sup>Chadron State College, Chadron, NE, <sup>2</sup>University of Idaho Cooperative Extension, ID, <sup>3</sup>University of Wyoming Uinta County Extension, Evanston, WY.

Carcass measurements on market beef are becoming increasingly difficult to obtain, as processing plants are less willing or able to allow outside people into facilities to acquire carcass data. Ultrasound technology, which has been used since the 1950's, has provided producers with the ability to collect carcass data on live animals. However, predicting intramuscular fat (IMF) has not proven to be accurate with chute-side service. Thus, this study was conducted to evaluate the ac-

curacy of new software designed to measure IMF at chute-side utilizing ultrasound. Fifty-seven crossbred market steers were fed a tradition feedlot ration designed for growth to market weight within 150-160 days on feed. Steers were measured ultrasonically using chute-side methods and Central Ultrasound Processing for 12th rib fat thickness, longissimus muscle area and percent IMF on approximately days 90 and 150. Steers were harvested five days after the second scan and carcass data collected. In addition a one-inch steak was collected from the 12-13th rib region and chemically analyzed for fat content of the longissimus dorsi muscle. Data will be analyzed utilizing the general linear model of SAS.

**Key Words:** Ultrasound, Chute-side Accuracy, Carcass Quality

## Nonruminant Nutrition (Addendum)

**366 Comparison of antimicrobial alternatives in irradiated diets for nursery pigs.** T. P. Keegan\*, J. M. DeRouchey, J. L. Nelssen, M. D. Tokach, R. D. Goodband, S. S. Dritz, and C. W. Hastad, *Kansas State University, Manhattan.*

Previous research at Kansas State University indicated irradiation can effectively reduce the bacterial concentration in nursery diets. Our hypothesis for this research was that eliminating bacteria in the feed via irradiation would allow the impact of antimicrobial alternatives to be more easily measured. In a 27 d growth assay, 354 weanling pigs (PIC, 6.9 kg and 18 ± 2 d of age) were fed one of 9 experimental diets: 1) control diet with no antimicrobials, 2) irradiated control diet with no antimicrobials, and irradiated control diet with added; 3) Carbadox (50 g/ton), 4) Probios<sup>®</sup> (1.6% from d 0 to 14 and 0.8% from d 14 to 21), 5) BioSaf<sup>®</sup> (0.3%), 6) Biomate Yeast Plus<sup>®</sup> (0.1%), 7) Bio-Mos<sup>TM</sup> (0.3%), 8) Bio-Plus<sup>®</sup> 2B (0.05%), or 9) LactoSacc<sup>®</sup> (0.2%). There were 8 pens/treatment and 5 pigs/pen. BioSaf<sup>®</sup>, Biomate Yeast Plus<sup>®</sup>, and Lacto Sacc<sup>®</sup> are all concentrated forms of selected live yeast cells while Bio-Mos<sup>TM</sup> is a mannanoligosaccharide derived from yeast.

Probios<sup>®</sup> is a form of lactic acid bacteria and Bio Plus<sup>®</sup> 2B contains two bacillus strains. All antimicrobials were added after diets were irradiated. Neither irradiation nor feed additives in an irradiated-diet improved growth performance compared to the non-irradiated control. From d 0 to 27, ADG was 296, 300, 301, 290, 255, 285, 303, 295, and 284 g and Gain/feed (G/F) was 0.78, 0.79, 0.76, 0.71, 0.75, 0.76, 0.77, 0.79, and 0.76 for diets 1 to 9, respectively. Pigs fed the non-irradiated control diet, irradiated control diet or irradiated diets containing Carbadox, Bio-Mos<sup>TM</sup>, or Bio-Plus<sup>®</sup> 2B had greater ADG ( $P < 0.05$ ) than pigs fed BioSaf<sup>®</sup>. Pigs fed Probios<sup>®</sup> had a poorer G/F ( $P < 0.05$ ) compared to all other test diets. Pigs fed the irradiated control or Bio-Plus<sup>®</sup> 2B had improved G/F ( $P < 0.05$ ) compared to pigs fed BioSaf<sup>®</sup>. In conclusion, irradiating the control diet or adding the feed additives to the irradiated diet did not improve growth performance. Eliminating the bacteria in the control diet by irradiation did not allow the impact of antimicrobial alternatives to be more easily measured.

**Key Words:** Nursery Pig, Irradiation, Feed Additive