

# Journal of ANIMAL SCIENCE

Volume 55

October 1982

Number 4

## TABLE OF CONTENTS

### APPLIED ANIMAL SCIENCE

	<i>Page</i>
Effects of Carbadox and Pyrantel Tartrate on Performance and Indices of Mycoplasma Hyopneumoniae and Ascaris Suum Infections in Pigs. <i>Dean R. Zimmerman, D. P. Conway, D. H. Bliss, D. O. Farrington and H. J. Barnes</i> . . . . .	733
Estrous Characteristics of Finnsheep Crossbred and Morlam Ewes. <i>T. G. Jenkins and J. J. Ford</i> . . . . .	741
Organic Acid-Preserved High Moisture Sorghum for Growing-Finishing Swine. <i>D. A. Knabe and T. D. Tanksley, Jr.</i> . . . . .	745
Influence of Forage Species and Creep Grazing on a Cow-Calf System. I. Intake and Digestibility of Forages. <i>J. L. Vicini, E. C. Prigge, W. B. Bryan and G. A. Varga</i> . . . . .	752
Influence of Forage Species and Creep Grazing on a Cow-Calf System. II. Calf Production. <i>J. L. Vicini, E. C. Prigge, W. B. Bryan and G. A. Varga</i> . . . . .	759

### BREEDING AND GENETICS

Sire $\times$ Region of United States and Herd Interactions for Calving Ease and Birth Weight. <i>P. J. Burfening, D. D. Kress and R. L. Friedrich</i> . . . . .	765
Interaction of Sire $\times$ Length of Testing Period and Estimation of Genetic Parameters for Performance Testing Traits of Japanese Black Bulls. <i>Y. Sasaki, H. Iwaisaki, T. Masuno and S. Asob</i> . . . . .	771
The Effects of Inbreeding in a Flock of Hampshire Sheep. <i>William R. Lamberson, David L. Thomas and Kenneth E. Rowe</i> . . . . .	780
Growth and Compositional Characteristics of Young Bulls in Diverse Beef Breeds and Crosses. <i>Curtiss M. Bailey, P. J. David, Jay S. Dow, Jr., T. P. Ringkob and C. F. Speth</i> . .	787
Additive Breed and Heterosis Effects for Individual and Maternal Influences on Feedlot Gain and Carcass Traits of Angus, Brahman, Charolais and Crossbred Steers. <i>F. M. Peacock, M. Koger, A. Z. Palmer, J. W. Carpenter and T. A. Olson</i> . . . . .	797

### GROWTH AND DEVELOPMENTAL BIOLOGY

The Role of Lipoproteins in Lipid Metabolism of Meat Animals. <i>P. M. Kris-Etherton and T. D. Etherton</i> . . . . .	804
The Relationship of Fetal Weight to Serum Albumin and Alpha-Fetoprotein in Swine. <i>R. T. Stone and R. K. Christenson</i> . . . . .	818

### MEAT SCIENCE

Utilization of the Intact Male for Red Meat Production: A Review. <i>S. C. Seideman, H. R. Cross, R. R. Oltjen and B. D. Schanbacher</i> . . . . .	826
--	-----

## NONRUMINANT NUTRITION

Caloric Requirements of Early Weaned Pigs Fed Corn-Soybean Meal-Based Diets. <i>J. C. McConnell, M. W. Stuck, R. C. Waldorf, W. P. Byrd and L. W. Grimes</i> . . . . .	841
Growth, Reproductive Performance and Nitrogen Balance of Gilts as Affected by Protein Intake and Stage of Gestation. <i>Rick D. Jones and Charles V. Maxwell</i> . . . . .	848
Performance and Concentration of Amino Acids in Plasma and Urine of Young Pigs Fed Diets With Excesses of Either Arginine or Lysine. <i>L. Lee Southern and David H. Baker</i> . . . . .	857
Influence of Energy Intake During Lactation on Subsequent Gestation, Lactation and Postweaning Performance of Sows. <i>D. E. Reese, B. D. Moser, E. R. Peo, Jr., A. J. Lewis, Dwane R. Zimmerman, J. E. Kinder and W. W. Stroup</i> . . . . .	867

## PHYSIOLOGY AND ENDOCRINOLOGY

Purification and Action Sites of a Follicle Stimulating Hormone Inhibitor From Bovine Follicular Fluid. <i>E. Sato, T. Ishibashi and A. Iritani</i> . . . . .	873
Increased Numbers of Sperm in the Oviducts and Improved Fertilization Rates in Rabbits After Administration of Phenylephrine or Ergonovine Near the Time of Insemination. <i>H. W. Hawk, B. S. Cooper and H. H. Conley</i> . . . . .	878
Effect of Acetylcholine, Prostaglandin F <sub>2</sub> $\alpha$ and Estradiol on Number of Sperm in the Reproductive Tract of Inseminated Rabbits. <i>H. W. Hawk, B. S. Cooper and H. H. Conley</i> . . . . .	891
Effect of Estradiol on Hypothalamic GnRH and Pituitary and Serum LH and FSH in Ovariectomized Pigs. <i>N. M. Cox and J. H. Britt</i> . . . . .	901

## RUMINANT NUTRITION

Ammonia Treatment of Corn Silage. I. Feedlot Performance of Growing and Finishing Steers. <i>L. W. Lomas, D. G. Fox and J. R. Black</i> . . . . .	909
Ammonia Treatment of Corn Silage. II. Net Energy Evaluation and Silage Characterization. <i>L. W. Lomas and D. G. Fox</i> . . . . .	924
Effects of Limestone and Sodium Bicarbonate Buffers on Rumen Measurements and Rate of Passage in Cattle. <i>G. L. Haaland and H. F. Tyrrell</i> . . . . .	935
Effect of Crude Protein Level and Limestone Buffer in Diets Fed at Two Levels of Intake on Rumen pH, Ammonia-Nitrogen, Buffering Capacity and Volatile Fatty Acid Concentration of Cattle. <i>G. L. Haaland, H. F. Tyrrell, P. W. Moe and W. E. Wheeler</i> . . . . .	943
Effects of Orotic Acid on In Vitro Volatile Fatty Acid Production by Sheep Rumen Fluid. <i>L. Bueno and P. Ralison</i> . . . . .	951
Effect of Added Fat and Calcium on In Vitro Formation of Insoluble Fatty Acid Soaps and Cell Wall Digestibility. <i>T. C. Jenkins and D. L. Palmquist</i> . . . . .	957
Mineral Supplementation of Beef Cattle in the Bolivian Tropics. <i>L. R. McDowell, Bernardo Bauer, Enrique Galdo, Marvin Koger, J. K. Loosli and J. H. Conrad</i> . . . . .	964
Prediction of Forage Quality Using Near Infrared Reflectance Spectroscopy on Esophageal Fistula Samples From Cattle on Mountain Range. <i>J. L. Holechek, J. S. Shenk, M. Vavra and D. Arthun</i> . . . . .	971
Ruminal Motility of Stocker Cattle Grazed on Winter Wheat Pasture. <i>Gerald W. Horn and Denzil F. Frost</i> . . . . .	976
Northeastern Section ASAS Distinguished Service Award, 1982 . . . . .	983
Northeastern Section ADSA-ASAS Young Scientist Award, 1982 . . . . .	985
Western Section ASAS Distinguished Service Award, 1982 . . . . .	986
Western Section ASAS Young Scientist Award, 1982 . . . . .	987
Reports from Representatives of the Society . . . . .	988
News and Notes . . . . .	989
Placement . . . . .	992