

Journal of **ANIMAL SCIENCE**

Volume 41

JULY 1975

Number 1

TABLE OF CONTENTS

	<i>Page</i>
BREEDING AND GENETICS	
Breed, Heterosis and Environmental Influences on Growth and Puberty in Ewe Lambs. <i>Gordon E. Dickerson and Danny B. Laster</i>	1
Lamb Performance and Combining Ability of Columbia, Suffolk and Targhee Breeds of Sheep. <i>Raj Rastogi, W. J. Boylan, W. E. Rempel and H. F. Windels</i>	10
Phenotypic Relationships within Angus and Hereford Females. I. Heifer Growth and Subsequent Cow Productivity. <i>Andrew C. Boston, J. V. Whiteman and R. R. Frahm</i> . . .	16
Phenotypic Relationships within Angus and Hereford Females. II. Repeatabilities of Progeny Weaning Weights. <i>Andrew C. Boston, J. V. Whiteman and R. R. Frahm</i>	23
Selection for Increased Prewaning and Postweaning Weight Gain in Mice. <i>R. R. Frahm and M. A. Brown</i>	33
Genetic Resources for Efficient Meat Production in Sheep: Prewaning Viability and Growth of Finnsheep and Domestic Crossbred Lambs. <i>G. E. Dickerson, H. A. Glimp and K. E. Gregory</i>	43
MEAT SCIENCE AND MUSCLE BIOLOGY	
Factors Affecting Desirability of Bacon and Commercially-Processed Pork Bellies. <i>G. C. Smith, R. L. West and Z. L. Carpenter</i>	54
Factors Affecting Porcine Muscle Fiber Type, Diameter and Number. <i>L. R. Miller, V. A. Garwood and M. D. Judge</i>	66
Morphology and Development of Endomysial Connective Tissue in Porcine and Bovine Muscles. <i>H. J. Swatland</i>	78
Relationships between Performance Traits and Certain Biological Properties of Testicular Tissue in Swine. <i>Roy N. Sharp, Paul R. Noland and Zelpha B. Johnson</i>	87
MONOGASTRIC NUTRITION	
Roughages in Swine Gestation Diets. <i>David M. Danielson and John J. Noonan</i>	94
Effects of Pregnant Mare Serum and Chlortetracycline on the Reproductive Efficiency of Sows. <i>J. A. Soma and V. C. Speer</i>	100
Distribution in Piglets after Administration of ¹⁴ C-L-Proline as Studied by Whole Body Autoradiography and Impulse Counting. <i>S. G. Bengtsson and R. V. J. Hakkarainen</i>	106
PHYSIOLOGY AND ENDOCRINOLOGY	
Plasma Cortisol and Total Progestin Levels in Holstein Steers during Acute Exposure to High Environmental Temperature (42 C) Conditions. <i>T. A. Abilay, R. Mitra and H. D. Johnson.</i>	113
Mammary Gland Growth in Sheep. <i>R. R. Anderson</i>	118

Serum Thyroxine Concentration in Sows Housed in a Subtropical Area. <i>Walter Chia-Mo Wan, Sun-Chang Wung, Pi-Hsueh Li, Chao-Tung Tai, Yo-Hai Kou and Fub-Kiang Kob</i> . . .	124
Effect of Rates of Freezing, Thawing and Level of Glycerol on the Survival of Bovine Spermatozoa in Straws. <i>O. L. Rodriguez, W. E. Berndtson, B. D. Ennen and B. W. Pickett</i> . . .	129
Effect of Antibacterial Agents on the Motility of Stallion Spermatozoa at Various Storage Times, Temperatures and Dilution Ratios. <i>D. G. Back, B. W. Pickett, J. L. Voss and G. E. Seidel, Jr.</i>	137
Prostaglandins F in Uterine Tissue and Venous Plasma of Ewes with Intrauterine Devices. <i>J. E. Pexton, S. P. Ford, Laird Wilson, Jr., R. L. Butcher and E. K. Inskeep</i>	144
Prostaglandins F in Uterine Venous Plasma, Ovarian Arterial and Venous Plasma and in Ovarian and Luteal Tissue of Pregnant and Nonpregnant Ewes. <i>J. E. Pexton, C. W. Weems and E. K. Inskeep</i>	154
Serum LH and Testosterone and Sperm Numbers in Pubertal Bulls Chronically Treated with Gonadotropin Releasing Hormone. <i>K. Mongkonpunya, H. D. Hafs, E. M. Convey and H. A. Tucker</i>	160
Effect of Prostaglandin F _{2α} on the Estrous Cycle, Corpora Lutea and Progesterone Levels of Hysterectomized Cows. <i>V. A. LaVoie, G. R. Poncelet, D. K. Han, C. L. Soliday, P. W. Lambert and E. L. Moody</i>	166
Dose-Response Influence of Prostaglandin E ₁ and Somatostatin on Plasma Levels of Growth Hormone, Prolactin and Thyrotropin in Sheep. <i>S. L. Davis and K. Anfinson</i>	172

RUMINANT NUTRITION

Neutron Activation Analysis of Dysprosium (A Potential Inert Market) in Hay and Feces. <i>Melvin C. Young, F. Eric Haskin, Morton E. Wacks, Brent Theurer and Phil R. Ogden</i> . . .	178
Cell-Wall Fractions and <i>In Vitro</i> Digestibility of Peruvian Feedstuffs. <i>William J. Johnson and Danilo Pezo</i>	185
Serum Magnesium Levels of Ewes Grazing Orchardgrass Topdressed with Dolomite or Calcite. <i>R. L. Amos, G. J. Crissman, R. F. Keefer and D. J. Horvath</i>	198
Influence of Breeds of Beef Cattle on Ration Utilization. <i>R. L. Moore, H. W. Essig and L. J. Smithson</i>	203
Seasonal Trends in Nutrients and Cattle Digestibility of Forage on Pine-Wiregrass Range. <i>C. E. Lewis, R. S. Lowrey, W. G. Monson and F. E. Knox</i>	208
Electronic Transducer for Ruminant Research. <i>S. E. Law and E. M. Sudweeks</i>	213
Effects of Concentrate Type and Level and Forage Type on Chewing Time of Steers. <i>E. M. Sudweeks, M. E. McCullough, L. R. Sisk and S. E. Law</i>	219
Appetite and Insulin-Metabolite Harmony in Portal Blood of Sheep Fed High or Low Roughage Diet with or without Intraruminal Infusion of VFA. <i>A. N. Bhattacharya and M. Alulu</i>	225

TEACHING

The Special Project Approach to Teaching Animal Science Courses. <i>D. M. Schaefer and R. G. Kauffman</i>	234
---	-----

OTHER

Abstracts of Papers for Presentation at the 67th Annual Meeting of the American Society of Animal Science	238
Abstracts of Papers to be Presented at the Joint Meetings of the Northeast Section, American Society of Animal Science and the Northeast Division, American Dairy Science Association	431
Committee Reports	440
Reports from Representatives of the Society	454
American Registry of Certified Animal Scientists (ARCAS)	460
Southern Section A.S.A.S. Distinguished Service Award	488
Placement	489
News and Notes	492