

Journal of **ANIMAL SCIENCE**

Volume 40

JANUARY 1975

Number 1

TABLE OF CONTENTS

Applied Animal Science	Page
Comparison of Supplements Containing Soybean Meal and Urea Fed with Whole or Ground Shelled Corn to Beef Cattle. <i>T. W. White, W. L. Reynolds and F. G. Hembry</i>	1
A Multiple Regression Model for Net Income Estimates from 100-Sow Production Units. <i>W. L. Alsmeyer, A. J. Clawson, A. R. Manson and A. C. Linnerud</i>	6
Development of a Record System for Measuring Swine Breeding Herd Efficiency. <i>H. E. Rodeffer, A. D. Leman and A. G. Mueller</i>	13
Breeding and Genetics	
Genetics of Reproduction in Domesticated Rainbow Trout. <i>G. A. E. Gall</i>	19
Maternal Heterosis in Swine: Reproductive Performance and Dam Productivity. <i>R. K. Johnson and I. T. Omtvedt</i>	29
Realized Genetic Parameters from Index Selection in Mice. <i>P. Jeffrey Berger and Walter R. Harvey</i>	38
Characterization of Response to Selection for Growth and Maternal Ability in Laboratory Mice. <i>Timothy J. LaSalle and John M. White</i>	48
Genetic and Environmental Effects and Interactions in Swine Growth and Feed Utilization. <i>B. Bereskin, R. J. Davey, W. H. Peters and H. O. Hetzer</i>	53
Selection for Ovulation Rate in Swine: Population, Procedures and Ovulation Response. <i>Dwane R. Zimmerman and P. J. Cunningham</i>	61
Systematic Crossfostering within Control Lines. <i>J. J. Rutledge and A. B. Chapman</i>	70
Meat Science and Muscle Biology	
Variation of Plasma Creatine Phosphokinase Activity in Swine. <i>D. H. Beermann, D. N. Marple, C. W. Hirschinger and R. G. Cassens</i>	75
Nonruminant Nutrition	
Effect of Calcium and Phosphorus Levels on Growth, Reproduction and Bone Development of Ponies. <i>R. M. Jordan, V. S. Myers, Bradford Yoho and Francis A. Spurrell</i>	78
Effect of Three Pasture Grasses on Yearling Pony Weight Gains and Pasture Carrying Capacity. <i>R. M. Jordan and G. C. Marten</i>	86
Effect of Processing Temperature and L-Lysine Supplementation on Utilization of Sunflower Meal by the Growing Rat. <i>H. E. Amos, D. Burdick and R. W. Seerley</i>	90

	Page
Physiology and Endocrinology	
Porcine Spermatozoan Respiration and Motility in the Presence of Bovine Follicular Fluid. <i>H. Edward Grotjan, Jr., Billy N. Day and Dennis T. Mayer</i>	96
Freezing of Boar Spermatozoa: Fertilizing Capacity with Concentrated Semen and a New Thawing Procedure. <i>V. G. Pursel and L. A. Johnson</i>	99
Renal Response to Vasopressin Infusion in Vitamin A-Deficient and Normal Ewes. <i>R. J. Ritter, III, R. E. Tucker, G. T. Schelling and G. E. Mitchell, Jr.</i>	103
Effect of Age of Boars on Testicular Lipids and Fatty Acids. <i>L. A. Johnson and V. G. Pursel</i>	108
Ruminant Nutrition	
Performance of 3-Year-Old Hereford, Hereford x Holstein and Holstein Cows on Range and in Drylot. <i>J. W. Holloway, D. F. Stephens, J. V. Whiteman and Robert Totusek</i>	114
Biuretolytic Activity of Rumen Microorganisms as Influenced by Dietary Levels of Biuret, Molasses and Dehydrated Alfalfa. <i>R. D. Wyatt, R. R. Johnson and E. T. Clemens</i>	126
Zinc Metabolic Adaptations in Calves Fed a High but Nontoxic Zinc Level for Varying Time Periods. <i>P. E. Stake, W. J. Miller, R. P. Gentry and M. W. Neathery</i>	132
Performance, Digestibility and ⁴⁰ K Levels in Lambs during Compensation for Feed Restriction. <i>J. M. Asplund, H. B. Hedrick and C. D. Haugebak</i>	138
Ensiled Broiler Litter and Corn Forage. I. Fermentation Characteristics. <i>B. W. Harmon, J. P. Fontenot, K. E. Webb, Jr.</i>	144
Ensiled Broiler Litter and Corn Forage. II. Digestibility, Nitrogen Utilization and Palatability by Sheep. <i>B. W. Harmon, J. P. Fontenot and K. E. Webb, Jr.</i>	156
Other	
Wind-Chill Effect for Cattle and Sheep. <i>D. R. Ames and L. W. Insley</i>	161
Abstracts of Papers to be Presented at the Annual Meeting of the Southern Section, A.S.A.S.	167
Placement	205
News and Notes	206