

# WERA-39-WSASAS

# Sheep Symposium

*Integrating Advanced Concepts into  
Traditional Practices*



June 19, 2013

Museum of the Rockies  
Montana State University  
Bozeman, Montana



## **Keynote Speaker: Rodney Kott**

Professor and Sheep Extension Specialist, *Montana State University*

### **Impact of Research on the Sheep Industry**

Dr. Rodney Kott received his BS and MS from Texas A&M University and PhD from New Mexico State University in 1980. After receiving his PhD, Dr. Kott became the Extension Sheep Specialist at Montana State University where he continues to serve the Montana Sheep Industry. Dr. Kott has provided leadership to Montana sheep extension programs for more than 30 years and more recently included activities of the Montana Wool Laboratory. Through the years, Dr. Kott has been involved in National efforts such as Targeted Grazing, the National Sheep Improvement Program (NSIP), and the Certified Wool Classing Program. In Montana, Dr. Kott has been involved in the utilization of sheep to manage invasive plants (targeted grazing), the restructuring of the wool pool marketing system, and the use of genetic records at the Miles City Ram Sale. Research emphasis includes winter supplementation, lamb survival, objective measurement of wool and more recently the development of genetic records and selection indexes in sheep, and residual feed intake. Dr. Kott received the Extension Award from the American Society of Animal Science in 1996; Hall of Fame from the US Targhee Association in 2005; Outstanding Extension Worker from MSU Extension in 2007, Agency Weed Fighter from the Montana Weed Control Association in 2008; and the Flock Tender Award from the American Sheep Industry in 2009. Dr. Kott continues to work closely with the Montana Wool Growers Association and the national American Sheep Industry Association.



## **David Anderson**

Professor and Extension Economist, *Texas A&M AgriLife Extension Service*

### **The U.S. Lamb Market**

David Anderson is a Professor and Extension Economist – Livestock Economist -- with the Texas A&M AgriLife Extension Service. After finishing a PhD at Texas A&M University in 1994, he was a livestock market analyst at the Livestock Marketing Information Center in Denver, Colorado. He returned to Texas A&M in 1996. His work involves the analysis of livestock and dairy market economics and policy. He is originally from Coolidge, Arizona where his father is a cotton farmer.

Dr. David Anderson is a Professor and Extension Economist in the Department of Agricultural Economics at Texas A&M University. His research and extension education activities are in livestock, and food products marketing and agricultural policy, focusing on relevant issues for Texas producers. He is the Texas AgriLife Extension Livestock and Food Products Marketing economist.

Dr. Anderson's program has focused research on the impact of alternative farm programs on the livestock, dairy and crop sectors of agriculture. Dr. Anderson has done extension research on wool, mohair, and dairy policy. Recent extension programs have focused on market outlook, animal identification systems, and country of origin labeling. He currently teaches Ag. Econ. 614 which is an applied policy analysis course, primarily for M.S. students.

Dr. Anderson received two degrees in agricultural economics at the University of Arizona and earned a Ph.D. in agricultural economics at Texas A&M University. Prior to returning to Texas A&M in 1996, he worked for the Colorado Agricultural Extension Service, Colorado State University, in the Livestock Marketing Information Center for two years. He has received awards for Professional Excellence from the American Agricultural Economics Association, the Outstanding Extension Program Award from the Western and Southern Agricultural Economics Associations, and the TAMU Deputy Chancellor's Distinguished Performance Team Award for Research and Extension.



## Rebecca Cockrum

Postdoctoral Fellow, Animal Science, *Colorado State University*

### **Applying Genomic Selection Technology to the Sheep Industry**

After receiving her B.S. degree in Animal Science at Arkansas State University in 2004, Dr. Cockrum moved to St. Louis, MO to gain experience in industry as a scientific recruiter. Dr. Cockrum was then accepted into the Reproductive Biology program in the Department of Animal Science at the University of Wyoming where she received her M.S. degree in 2009 and Ph.D. in 2012 under the direction of Dr. Kristi Cammack. Dr. Cockrum's thesis research focused on differential gene expression in liver in response to toxins in the diet of sheep. Dr. Cockrum then collaborated with AgResearch in New Zealand to identify ovine markers associated with feed efficiency for her dissertation research. During her 5-year graduate career, Dr. Cockrum presented research at 17 scientific meetings and was an invited speaker at AgResearch, New Zealand, National Lamb Feeders Association, USDA-Meat Animal Research Center, and the University of Wyoming. Dr. Cockrum is the primary author of two peer-reviewed publications, contributing author of five peer-reviewed publications, and has three manuscripts in-progress. A few highlighted achievements include: the first WSASAS graduate student director, ASAS graduate student representative for the Small Ruminant committee, President of the University of Wyoming Animal Science Graduate Student Association, Gamma Sigma Delta Outstanding Ph.D. Student of the Year, and received \$24,990 from Western SARE grant program to conduct a portion of her dissertation research. Dr. Cockrum is currently a Postdoctoral Fellow at Colorado State University under the direction of Dr. Milt Thomas. Her current research focuses on characterizing gene regulatory networks involved in hypoxic-induced pulmonary hypertension and bovine respiratory disease in cattle.



## Thomas Craig

Professor Veterinary Parasitologist, *Texas A&M*

### **Sheep Parasites: Problems, Resistance, New Products and Practices for Parasite Control**

Thomas M. Craig earned his DVM from Colorado State University, and PhD from Texas A&M University. He served as a military veterinarian in Denmark, and Slovenia, then was in mixed veterinary practice for 7 years in Colorado, New Mexico and New Zealand; where grazing animals were a significant part of practice activities. Presently he is a faculty member in the College of Veterinary Medicine Texas A&M University where he does research, diagnosing and teaching veterinary parasitology as a professor in the Department of Veterinary Pathobiology (worms, germs and things too gross to mention). His teaching activities are to 2nd and 4th year veterinary students; covering aspects basic and clinical parasitology, graduate students, continuing education for veterinarians, and livestock owners and introductory parasitology to high school and pre-high school students: Vet camps, 4-H, Pony Clubs. Over the years he has engaged in research primarily concerned with the epidemiology and control of internal parasites of grazing animals, the diagnosis, epidemiology and treatment of arthropod borne disease and the evaluation of anthelmintics in laboratory and field conditions. He also serves as the director of the parasitology diagnostic laboratory; servicing the veterinary teaching hospital, veterinary practitioners, the Texas Veterinary Medical Diagnostic Laboratory and animal owners. He consults with veterinary practitioners, animal owners and pharmaceutical companies. Over the years he helped raise two wonderful children, cattle, sheep, and horses for fun and occasional profit.



## **Peter Orwick**

Executive Director, *American Sheep Industry*

### **ASI Initiatives for Industry Growth**

As ASI's executive director since 1997, Peter Orwick has spearheaded major initiatives including the first successful Trade Action on imported lamb meat from Australasia and the wool marketing loan, which combined, resulted in more than \$250 million in federal funding for the U.S. sheep industry. Established the national scrapie disease eradication program, first industry wide promotion checkoff for lamb with packers, feeders and producers contributing, created a livestock risk insurance for lamb, and funded a multi-million dollar international marketing program for wool that doubled American wool exports. Orwick led creation of Mandatory Price Reporting, national sheep industry improvement center, and the Sheep Venture Company under ASI with multi millions of dollars in assets including wool superwash textile equipment, lamb insurance and military product development research. Prior to his executive director position, Orwick served as ASI's director of government affairs from August 1991 to February 1997, during which he oversaw the association's government relations and natural resources programs.

Before joining the ASI staff, Orwick was appointed director of the South Dakota Department of Agriculture's Division of Conservation by Governor George Mickelson to manage soil and water conservation programs statewide. Orwick initiated the plan that would become the state's official soil and water conservation guidance. Orwick was reared on a sheep and cattle ranch on the rangelands of western South Dakota. His parents, brother and sisters are sheep ranchers with several thousand Rambouillet ewes. He received bachelor of science degrees in animal science and business from South Dakota State University in 1984.



## **Kim Vonnahme**

Associate Professor, Animal Scientist, *North Dakota State University*

### **Maternal Environment Impacts Fetal and Offspring Outcomes in Sheep**

Kimberly Vonnahme grew up on a livestock and grain farm near Breda, Iowa (West-Central Iowa) and is the second oldest of five children. Upon graduation from high school, Kim attended Iowa State University majoring in Animal Science. Her interest in reproductive biology was sparked, and after graduation in 1996, pursued her Master of Science degree at Oklahoma State University under the guidance of Dr. Rodney Geisert working on embryo-uterine interaction during early pregnancy in the pig with a thesis entitled "Detection of Glandular Kallikrein and Low Molecular Weight Kininogen in the Porcine Uterus during the Estrous Cycle and Early Pregnancy". She returned to Iowa State University in 1998 to begin her PhD program with Dr. Steve Ford, and moved with Ford to the University of Wyoming in 2000, where she completed her PhD degree in 2003. While her dissertation title was "The Impacts of Placental Size and Vascularity on Litter Size in the Pig", Kim also helped with the early studies in the Center for the Study of Fetal Programming developing a nutritional model using pregnant sheep. In the fall of 2003, Kim moved to North Dakota State University with interests in learning measurements of vascularity in sheep and cow placenta from Dr. Larry Reynolds. In April, 2004, Kim accepted an assistant professor position in the Department of Animal Sciences to teach and conduct research. She became Associate Professor in 2010. Dr. Vonnahme's research programs focuses on the impacts of maternal nutrition on fetal and placental development in sheep and cattle. More specifically, Kim is interested in how the maternal nutrition impacts uteroplacental blood flow, development of the placenta, and nutrient transfer. Kim is married to Michael Kangas and they have 2 children, Katie and Joey.



## **John Walker**

Professor and Resident Director of Research, *Texas A&M AgriLife Research*

### **Sheep, Black Swans and the Future of Agriculture**

Dr. Walker has served as Professor and Research Director at the Texas A&M University Agricultural Research and Extension Center in San Angelo, Texas since 1997. His responsibilities include providing leadership to a multi-disciplinary team of scientists that develop new technologies for increasing the efficiency and sustainability of range livestock and wildlife production. His area of expertise involves foraging ecology, modification of livestock foraging behavior and targeted livestock grazing for landscape enhancement. Dr. Walker developed the first fecal near-infrared spectroscopy calibrations for predicting botanical composition of ruminant diets. He continues to develop near-infrared spectroscopy solutions in support of research in foraging ecology, and animal nutrition. Prior to his current position Dr. Walker was a rangeland scientist for the Agricultural Research Service at the U.S. Sheep Experiment Station in Dubois, Idaho. In this position he conducted research to improve sustainable utilization of rangelands. Studies included combination grazing of sheep and cattle; use of grazing livestock to control noxious weeds; genotypic and phenotypic factors affecting foraging behavior; weed ecology; low input sustainable sheep production systems; and carbon budgets on sagebrush steppe rangelands. Dr. Walker received his B.S. in wildlife science and Ph.D. in rangeland ecology both from Texas A&M and his M.S. in range science from Colorado State University. He has authored or co-authored 60 scientific journal articles and over 100 other professional publications. Dr. Walker serves on numerous professional and civic boards and committees including the Targeted Grazing Committee both for the Society for Range Management and the American Sheep Industry Association.



## **Travis Whitney**

Associate Professor, Ruminant Nutrition, *Texas A&M AgriLife Research*

### **Alternative Feeds: For a Temporary Crisis or Permanent Problem**

Dr. Whitney is an Associate Professor, Ruminant Nutritionist, and project leader for the Texas A&M AgriLife Research Nutrition Program, San Angelo. He is also a faculty member in the Department of Animal Science (College Station). He received a B.S. in Animal Science from Southwest Texas State Univ., a master's in Agricultural Education from Texas A&M Univ., and a doctorate in Animal Science/Ruminant Nutrition from the Univ. of Arizona. After receiving his Master's degree, he taught Animal Science classes at Palo Alto College (San Antonio) and did postdoctoral research at Montana State Univ. prior to his appointment in San Angelo. His interdisciplinary research program is directed toward helping producers (especially in the Edward's Plateau Region of Texas) make informed management decisions related to feeding livestock. His primary objective is to reduce feed costs by (1) increasing livestock production efficiency; (2) increasing the value of underutilized feed sources such as dried distillers grains and ground juniper and mesquite trees; (3) using plant secondary compounds to enhance ruminal function, bypass protein, and animal health, and reduce internal parasite viability. Dr. Whitney is currently Chairman of the American Society of Animal Science Western Section committee and a member of the following: American Society of Animal Science, Society of Range Management, American Registry of Professional Animal Scientists, Texas Sheep and Goat Raisers, TX A&M Agriculture Animal Care and Use Committee, TX A&M Council of Principal Investigators, WERA039 research group, and Texas Forage and Beef Workers group.



## **Rachel Frost**

Research Scientist, Range Science, *Montana State University*

### **Alternative Grazing Strategies for Industry Diversification and Rangeland Improvement**

Rachel Frost was raised on a sheep and cattle operation in central Texas and obtained a B.S and M.S in Animal Science from Angelo State University. Her research focused on the influence of genetics and experiences early in life on consumption of bitterweed by sheep. She received her Ph.D. at the University of Idaho after exploring the effects of age and body condition on the consumption of toxic compounds by goats. Her current research focuses on identifying strategies for improving rangeland through targeted livestock grazing and integration of targeted grazing with other vegetation management tools.



## **Keith Inskip**

Professor, Animal Reproduction and Management, *West Virginia University*

### **Factors Related to the Ewe That Affect Prolificacy in Sheep**

Keith Inskip grew up on a diversified livestock, dairy and poultry farm near Medley, West Virginia. He completed a B.S. in dairy science (1959) at West Virginia University, an M.S. in genetics (1960) and a Ph.D. in endocrinology (1964) at the University of Wisconsin, under the guidance of a famous reproductive physiologist, Dr. L. E. Casida. He became an Assistant Professor at West Virginia University in 1964 and has spent his entire career there, becoming Professor in 1974. Keith's research has centered upon understanding the mechanisms that regulate reproductive cycles in ruminant females, and applying that knowledge to management of reproduction in sheep, beef cattle and dairy cattle. Currently, he studies factors affecting late embryonic and early fetal losses of potential offspring in sheep and dairy cows. Keith was one of the initiators of the Allegheny Highlands Project, transferring technology to 85 beef and sheep producers in the 1970's and co-authored the proposals for funding of the WV Small Ruminant Management Project, now in its 15th year.

## **Montana Wool Growers Association**

### **Panel Review and Discussion**

Brent Roeder (executive secretary MWGA) and other members of the Montana Wool Growers Association will lead a panel discussion on research accomplishments and what research is needed by the sheep industry to sustain a viable future.

For more information contact:

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The Sheep Symposium is sponsored by the following:

\*WERA-39 Western Extension, research, and academic coordinating committee, sheep

\*WSASAS Western Section American Association of Animal Science

\*Montana State University Department of Animal and Range Sciences

\*Montana Woolgrowers Association

