



Mississippi State
UNIVERSITY

Animal and Dairy Sciences

2009 Newsletter

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To MSU Alumni and Friends,

In a few days our students will be arriving back on campus to start fall classes. This year we will have approximately 220 undergraduate students and 25 graduate students. Fall semester is an exciting time on campus with student activities, tailgating and football. A special activity this year will be the Animal and Dairy Sciences (ADS) Reunion on September 11 and 12. The reunion will be a special time for our alumni to visit with old friends and meet new ones in a fun-filled, two day event. On Friday evening we will gather at the MAFES Conference Center (called the Bull Barn because this is where Select Sires housed their dairy bulls many years ago) and share in some refreshments and fellowship. Then on Saturday the program will be at the Palmeiro Center on campus. The program will include farm tours, a judging contest for our animal and dairy judging team alumni, tours around campus and a noon meal with a department update and keynote speaker. I hope each of you will consider coming for this special time. On September 26 the Departments

of ADS and Food Science will tailgate at the Junction as we get ready to play football against LSU. You are invited to share food and fellowship with our faculty and staff at the big MSU tent in front of the M Club.

The department has changed over the years and we have hired new faculty to address the challenges and opportunities facing our clientele and the new generation of students at MSU. This year we have added three new faculty members to our dairy program. You will read about them in this newsletter. The faculty has revised the curriculum in ADS for students as they seek careers in agriculture. Together our teaching, research, and extension faculty are working together to mentor our students and to make Mississippi a better place to live. Come meet them at the reunion!

We have a new head Bulldog at MSU. Dr. Mark E. Keenum became Mississippi State's 19th president January 5, 2009, following a distinguished public service career. Dr. Keenum bleeds Maroon and White as he received the B.S., M.S. and Ph. D. in Agricul-

tural Economics at MSU. Dr. Keenum and his wife Rhonda have four children.

The economic downturn has impacted almost every segment of the agricultural industry and the ADS Department has not been spared. The department will face budget cutbacks this year and next and will have to develop strategies to survive this trend. Alumni can help in a variety of ways with scholarships for students, gifts of real property and cash gifts. As always, your support of the department is greatly appreciated. If you would like to visit either me or our development officer about how you can make a gift to our department please do not hesitate to give us a call.

Sincerely,

Terry E. Keenum

Professor & Head of ADS



Block and Bridle Club

The MSU Block and Bridle Club had a busy 2008-2009 academic year. Under the leadership of President Jared Beasley, the year started off with a fish fry, welcoming back old members and getting to know potential pledges. The club then became very busy halter breaking calves for the Little I show (participants shown below). The Little I show was a great success; pro-division was won by Seth Sumrall and novice division was won by Carla Williamson. After the show, it was immediately time to start working on Halloween on the Farm. The club raised over \$1000.00 during this three day event. In the spring of the year, 30 pledges were initiated into the club. Next on the calendar was the Dixie National Livestock Judging Contest where members assisted in holding cattle, running cards, and being group leaders. At the conclusion of the school year the club held a bake sale to raise funds for Share Our Strength, an organization that fights childhood hunger; hosted the Block and Bridle banquet and finished the year off with a crawfish boil. Plans are already in the works for an exciting 2009-2010 year with new officers: President Lee Hill (Vicksburg, MS), Vice President JB Farrell (Collierville, TN), Secretary Mandy Woods (Seminary, MS), Treasurer Kirsten Futch (Cross Roads, AL), Pledge Marshalls Courtney Law (Olive Branch, MS) and Rob Watson (Dyersburg, TN), and Scrapbook Editor Katie Jo Vanderslice (Pachuta, MS).



MSU Beef Team

Mississippi State University students Maggie Hutchens, Samantha Jones, Mark Monroe, Makenzie Ross, Nick Simmons, and Ben Totty participated in the 2009 MSU Beef Team this spring sponsored by the Mississippi Beef Council and co-mentored by Dr. Sylvia Byrd (Food Science, Nutrition, & Health Promotion) and Dr. Carolyn Huntington (Animal and Dairy Sciences). Students received intensive training on professionalism, retail cuts, food safety, cooking techniques, nutrition, and more! The remainder of the spring semester, students worked at a variety of events and venues both locally and across the state speaking with people of all ages to discuss how beef can be a part of a healthy diet. Events included the Mississippi Cattleman's Association convention, MSU Super Bulldog weekend, the MSU vs. Auburn baseball game (pictured above serving kabobs), Mississippi Beef Agribition, Sudduth Elementary school health fair, and various livestock shows. Keep an eye out for them in your part of the state.

Delivering value from cow functional genomics

The year of 2009 was indeed the “*The Year of the Ox*”

Researchers from around the world formed a consortium to fully map the bovine genome. The consortium included Dr. Memili and his former graduate student Dr. Nelida Rodriguez-Osorio. The blueprint of the bovine’s DNA was published in the prestigious scientific journal, *SCIENCE* on April 24, 2009. The blueprint can be used to help produce cattle with valuable traits and possibly aid in better understanding human disease and development.

Dr. Memili’s research group and collaborators produced new knowledge on molecular biology of bovine sperm, oocyte (egg) and embryo, shedding light onto mechanisms regulating developmental competency of gametes and embryos, i.e., fertility. Some of their findings were published in the Journal of BMC Genomics as three separate scientific papers.

Dr. Memili’s Laboratory provides research opportunities for undergraduate, graduate and post-doctoral students. For example two graduate students, Ms. Shernica Ferguson and Ms. LaShonda Robertson have graduated with their Masters of Science degrees in Agricultural and Life Sciences with a concentration in Genetics in the summer 2009. Ms. Christi Wolgemuth, an honor undergraduate majoring in biological engineering at MSU, did research on functional genomics of cattle.



Ms. Christi Wolgemuth presenting her research at the Undergraduate Research Symposium on April 21, 2009.



Dr. Erdogan Memili is the Director of the Laboratory of Animal Functional Genomics at the Department of Animal and Dairy Sciences. Research in the Laboratory is aimed at improving fertility and genetics of cattle. The Laboratory studies molecular, cell and developmental biology as well as molecular genetics of bovine gametes and embryos using functional genomics approaches. The Laboratory expects to deliver value from bovine functional genomics as markers and mechanisms to predict and improve fertility in cattle. Dr. Memili was the recipient of Outstanding Scientific Publication in 2007, and Faculty Diversity Award at MSU in 2009.

Highlights of the 4-H Livestock Program

Western National 4-H Roundup

There have been many highlights from the Mississippi 4-H Livestock Program over the past several months. In January 2009, a group of 4-H'ers traveled to the Western National 4-H Roundup in Denver, Colorado, to compete in various contests. Many of these contestants received individual and team awards for their performance, and the combination of all the individuals and teams that competed in horse contests placed second overall in the Horse Classic, which was the highest ever placing for Mississippi 4-H. A list of Mississippi winners can be found at http://msucare.com/4h_Youth/4hlivestock/index.html.

Dixie National Junior Round-Up

The highlight of the 2009 Dixie National Junior Round-Up was the 40th Sale of Junior Champions where youth were recognized for their hard work with their livestock projects. There were 41 animals sold for \$233,380. Since the beginning of the sale in 1970, buyers have paid more than \$3.9 million for the champion and reserve champion market animals exhibited at the Dixie National.

Another worthy component of the junior sale is the scholarship program that recognizes youth that have developed perseverance and life skills in the 4-H Livestock Program. These scholarships will assist Mississippi youth as they continue to pursue their life goals of going to college and equipping themselves with the knowledge and skills needed to be successful in the next stage of their life.

The Dixie National Sale of Junior Champions Committee distributed \$40,500 worth of scholarships to 33 exhibitors. The five largest scholarships, \$1,500 each, were awarded to the premier exhibitors in beef, dairy, lambs, hogs and goats. Academic scholarships for \$1,200 each went to 25 high school seniors. Additional \$1,000 scholarships were awarded to three supreme exhibitors in the categories of dairy female, beef female and beef bull.

For a feature about the generosity of one of our 4-H'ers who donated the proceedings of his steer to a friend with medical needs and other highlights from the 2009 Sale of Junior Champions, visit <http://msucare.com/news/print/fcenews/fce09/090206.html>.

4-H Club Congress

Approximately 200 youth competed in livestock-related contests in late May during Club Congress. A wide variety of contests was held, including Dairy Poster Contests, Visual Presentation Contests, Meats Judging, Dairy Products Judging, Livestock Bowl and Dairy Bowl. Congratulations to Smith County for winning Meats Judging – they will represent Mississippi in the national contest in January 2010. Congratulations also go to Tishomingo County for winning Dairy Bowl, and this team will compete at the national contest in Louisville, Kentucky, in November. Each year, we have a deep field of competitors in our livestock education contests.

4-H Horse Shows

Our four District 4-H Horse Shows and State 4-H Horse Championships are right around the corner. Each year, we have four competitive district shows to qualify horses for our state show. Last year, Mississippi was well represented at the regional show by our youth and their horses. We expect the same this year.

The State 4-H Horse Championships will be held in Jackson from July 8th through 12th at the Kirk Fordice Equine Center. Our show will start with education contests, including Individual and Team Demonstrations, Public Speaking, Horse Judging, Horse Bowl, Hippology, Horse Art, Horse Photography and T-shirt Design Contests. Our classes start on Thursday, July 9th and will conclude on Sunday, July 12th. From this show, we will qualify 42 horses to represent Mississippi at the 2009 Southern Regional 4-H Horse Championships in Little Rock, Arkansas.

Putting Dairy back in ADS

With the addition of three new dairy faculty: Dr. Stephanie Hill (Nutrition), Dr. Jamie Larson (Reproduction), and Mr. Lamar Adams (Extension), the dairy program is growing by leaps and bounds.



Dr. Stephanie Hill was born and raised in Canton, North Carolina which is in the heart of the Smoky Mountains. Dr. Hill completed her undergraduate and Master's degrees at North Carolina State University in the Animal Sciences and continued on to finish her Ph.D. at Virginia Tech, under the advisement of Dr. Katharine Knowlton. Dr. Hill's research program has focused mainly on heifer development, nutrient utilization, and waste management. While at Mississippi State, she plans to continue with those research areas and also build a program focusing on the grazing aspects of the dairy industry. Particularly, finding ways to more intensively utilize grass and Mississippi's extended growing season for more efficient milk production systems. Dr. Hill's research plans also include expanding heifer and replacement development programs and

helping MS and surrounding area producers meet waste and nutrient management regulations. Dr. Hill's teaching assignment includes Dairy Farm Management, Physiology of Lactation, Ruminant Nutrition, and Livestock and the Environment. She is also the current advisor to the MSU Dairy Club.



Dr. Jamie Larson is a reproductive physiologist working with cattle and is looking forward to getting some research started at both the dairy and beef units on campus. She grew up in Iowa where she attended Iowa State University for her undergraduate degree and then moved to the University of Minnesota to complete her Master's and Doctorate in animal science. Having enough of cold and snowy winters, she joined the Department of Animal and Dairy Sciences in March and is excited to be at Mississippi State University. Her work has been primarily involved with researching reproductive management strategies including estrous synchronization, resynchronization, and embryo transfer, the use of transrectal ultrasonography to predict anestrous cows and looking at the hormone progesterone and its role in early embryonic mortal-

ity. Dr. Larson plans to continue that work here and also investigate the role of dam nutritional status on the development and fertility of her offspring. She's enjoyed her time in Starkville so far and is looking forward to beginning to teach the reproductive physiology courses this fall.



Mr. Lamar Adams, Extension Instructor, was reared on his family's dairy farm near Newton, Mississippi. He earned his undergraduate and Master's degrees in Dairy Science from Mississippi State University in 1984 and 1987, respectively, with primary studies in Ruminant Nutrition under the direction of Dr. Jim Tomlinson where he investigated performance of unbred Holstein heifers grazing ryegrass, fungus infected fescue with or without clover, or fungus free fescue. He began service as an Extension educator with the Mississippi State University Extension Service in 1987 as Extension 4-H Youth Agent in Smith County. In 1990, Mr. Adams transferred to Tylertown, Mississippi to serve as Extension Agricultural Agent for Walthall County where he devoted nineteen years to being heavily engaged in providing productive educational

opportunities for dairy producers throughout the state. Mr. Adams joined the ADS faculty on May 1, 2009 to serve as Extension Dairy Specialist where he remains committed to continue forging a rewarding career as an Extension educator with the primary responsibility of developing, implementing, and evaluating effective educational programs to serve the needs of dairy producers and other clientele groups affiliated with the dairy industry.

Dairy Challenge Competition



The MSU-Dairy Club has been extremely productive especially considering it's small size, though membership was doubled in 2008-2009. Several club members competed in the Southern Regional Dairy Challenge competition this past fall in North Carolina. This is an educational event where students get the opportunity to gain hands on experience on the farm. Working as a four person team, students tour the dairy operation and begin to compile recommendations on nutrition, reproduction, milking management, waste management, labor, facilities, and financial management. After the tour of the dairy facility, teams are given the opportunity to develop a presentation for the farm staff and a panel of judges. Our students competed on mixed teams with students from other Southeastern schools and all those teams placed in the competition. This was the first time MSU has competed in the dairy challenge and we are excited to announce Mississippi State as the host of the 2010 Southern Regional Dairy Challenge. For more information, please contact Dr. Stephanie Hill at srhill@ads.msstate.edu.

Steak and Shake at the "Dude"



Students Joe Buntyn and Amanda Tucker waiting on their first customers.

The MSU Dairy Club and MSU Collegiate Cattlemen's Club put their heads together this past year to develop a way to generate funds for each club to help with costs throughout the school year. This past spring the students decided to provide food for sale at the MSU baseball games. The Dairy Club provided milk shakes with all the trimmings while the Cattlemen's Club cooked and prepared ribeye sandwiches for the fans at the ballpark. A trailer was provided by MSU athletics and the group set up shop out in the outfield next to the score board. The group sold their products at each game during the South Carolina, Auburn, and Super Bulldog Weekend with Kentucky series and raised funds to be used for their club functions in the upcoming year. Both groups felt that the event was a success and wants to thank the fans of MSU baseball for their support. The long term plan is to become a permanent fixture at the ball park each spring. So, next year when you come to cheer for the "Baseball Bulldawgs", make sure you come by our stand out in the "Lounge" and try a delicious chocolate milkshake with a juicy ribeye sandwich and support our clubs in ADS.

ADSA-Student Affiliate Division- Southern Section Meetings

Members of the Dairy Science Club also attended the Southern Section of the American Dairy Science Association- Student Affiliate Division meetings. This meeting gives club chapters the opportunity to display their annual club activities. Each club chapter gives updates on service projects, fundraising, social, and academic activities. Members can choose to participate in the Undergraduate Paper Competition in either the Dairy Foods, Dairy Production, or Original Research sections. Also, chapters can put on display scrapbooks and club displays to be judged in a competition.

This year, the MSU Dairy Science Club put together a display of their activities with a slideshow scrapbook and won First Place in the display category (pictured below). Some club members also competed in the Undergraduate Paper Competition. The club members also toured local dairies (this year's meeting was held at Clemson University) and interacted with producers and other key industry stakeholders.

Our Dairy Club sold milkshakes at the MSU Baseball games this year as their fundraising activity. Along with the MSU Collegiate Cattleman's Club, who sold ribeye steak sandwiches, the clubs raised over \$2,200. The dairy club intends to use their milkshake funds (along with donations from DFA) to pay for a trip in the fall to the panhandle of Texas and Southern Missouri to visit large dairy herds and grazing dairy herds.



Pictured at left: Members of MSU Dairy Science Club at Bush River Jerseys

Pictured at right: MSU Dairy Science Club Chapter Display at ADSA-Student Affiliate Division. First Place Winner



Faculty News

Dr. Dean Jousan received the Extension Customer Outreach Award at our annual extension conference this past November.



Dr. Ty Schmidt received the 2009 Ralph E. Powe Junior Faculty Enhancement Award.



Dr. Daniel Rivera is new to the Central R&E in Raymond as an Asst. Ext. Professor-Livestock Specialist for the SW district. He grew up in New Mexico and went to New Mexico State University for his B.S. and Ph.D. and West Texas A&M for his M.S. After his Ph.D., he worked on a post doc at Texas Tech for two years, and then spent four years in the industry as a tech consultant for an animal health company and later as a nutritionist for a feed company. His background is in ruminant nutrition with the bulk of his research focused on health-nutrition interactions of high risk stocker calves and feeders. His family consists of his wife Beth, two boys, John (4) and Andrew (2), and their dog, Layla. They live in Clinton.



Dr. Holly Terry Boland joined the faculty in January 2009. She was born and raised in Patrick County, Virginia.

Undergraduate Departmental Scholarships

Bryan & Nona Baker
Endowed Scholarship:
Andrew Cox

Billy Gene Diggs Memorial
Scholarship:
Tyler Scott

Henry H. Leveck Memorial
Scholarship Fund:
Rachel Meredith Jones

Janice McCool Durff & Alma
McCool Liles Endowment
& Scholarship Fund:
Cori Webb
Joseph Adcock
Amanda Arrington
J. B. Farrell
Devon Livingston

Reverend & Mrs. William Page
Brown Memorial
Scholarship:
Courtney Brown

W.L. "Buddy"
Richmond
Scholarship:
Marie Bing

Fuquay Endowed Scholarship in
Animal and Dairy Sciences:
Andrea Nicholson

Rodney Moore Scholarship:
Garrett Steede

Sherry Levin Memorial
Scholarship:
Courtney Law

Enoch Norton Endowed
Scholarship:
Anne Strohm

Bedenbaugh Scholarship:
Charles Huckaby

Linda "Big Lou" Schuerer
Scholarship:
Morgan Fuller

Glenn McCullough Scholarship:
Amanda Dew

Pictured to right:
Courtney Brown and
Dr. Mike Martin



Dr. Boland attended Virginia Tech where she received a B.S. in Biology and a M.S. in Animal Science. She completed her Ph.D. in Animal Science in January, 2009 and started working for MS State as an Assistant Research/Extension Professor of Beef Cattle Production at the Prairie Research Unit. Currently at Prairie they are conducting research on low-stress weaning techniques, new tall fescue cultivars, and beef cattle transport stress. They will be installing a new state of the art piece of equipment called the GrowSafe System later this year which will allow them to study animal intake and behavior.

They will be having a Field Day at Prairie on October 24. Details will be posted on the MSUcares website later in the year.

More Faculty & Student Achievements

Dr. Peter Ryan received the 2008-2009 Excellence in Graduate Teaching Award and Excellence in Teaching Overall Award of Merit in the College of Agriculture and Life Sciences. In addition, Dr. Ryan and three of his colleagues (Drs. Richard Hopper, David Christiansen, Kevin Walters) from the College of Veterinary Medicine (CVM) were the recipients of the 2009 Rosalind and Rodney Foil Faculty Teamwork award. Dr. Ryan also was the recipient of the Outstanding Research Award from the Honor Society Gamma Sigma Delta in 2008.

Mr. Jaime Curbelo Rodriguez, a doctoral student in Animal Physiology and advised by Dr. Scott Willard, was one of a handful of students across the nation to receive a 2009 scholarship award (\$1,500) from the National Milk Producers Federation. Mr. Curbelo Rodriguez, a native of Puerto Rico, is in the second year of his doctoral studies working on pathogen progression during mastitis and reproductive tract infections in dairy cows using novel bioluminescence imaging technology.

Mr. Wilson Cooper Brookshire, a 2007 graduate of the ADS undergraduate program and currently a student in the dual degree Doctor of Veterinary Medicine and Master of Veterinary Science program at Mississippi State University, was the recipient of a 2008-2009 Pork Leadership Academy Scholarship. Mr. Brookshire is from Meridian, Mississippi and his graduate studies advisor is Dr. Peter Ryan.

Remember When.....



Highlights of the 2008-2009 Competition Season for the MSU Equine Teams

The MSU Horse Judging Team had a successful competition season last year starting the season last June at the Appaloosa Youth Worlds/Nationals in Jackson, MS. The Horse Judging Team was named Grand Champion Team in Halter, Performance, and Reasons winning Overall Grand Champion Team. Team members were named Reserve and Grand Champion Individuals in Halter, Performance, Reasons, and Overall. Team members included Mandy Arrington, Megan Dorris, Holly Stuart, and Melissa Masters. After finishing off a successful summer competition, Team members Megan Dorris and Holly Stuart volunteered their time to assist with the youth horse judging competition as judging officials at the 4-H State Horse Show in Jackson, MS and Team member Melissa Masters volunteered her time last summer as a judging official for several of the local open horse shows and as a judging official last spring for the FFA State Horse Judging Competition in Starkville, MS. In the fall the Horse Judging Team traveled to Tulsa, OK to compete in the U.S. National Arabian & Half-Arabian Championship Horse Judging Competition. This was the first year the competition was hosted in Tulsa and was the largest competition ever hosted by the Arabian Horse Youth Association. The Team won U.S. Top Ten Awards in the In-Hand, Performance, and Reasons divisions placing the Team 5th overall in the contest. Team member Joseph Adcock's placings in the Performance classes gained him U.S. Top Ten Honors. Team members included Mandy Arrington, Patrick First, Devon Livingston, Lauren Middleton, Shannon Lindsey, Courtney Purvines, Kellie Kaletsch, Joseph Adcock, Kelley Benham, and Ashleigh Hoover.

Both the Huntseat and Stockseat Teams of the MSU Equestrian Team also had a successful competition season. Team members from both Teams brought home ribbons from every competition they participated in this year. Four Team members accumulated enough points throughout the show season to qualify for Regional competition. Regional qualifiers included Hannah Cunningham, Stephanie Aantoo, Camille Wood (Stockseat Team Captain), and Kristen Walters (Huntseat Team Captain). Stephanie Aantoo and Kristen Walters qualified to compete in both rail classes and over fences classes in which the success of both riders at Regionals qualified both riders for Huntseat Zones competition. Both riders won Top Ten Honors at Huntseat Zones.



Pictured above: MSU Horse Judging Team at Appaloosa Youth Worlds/Nationals

We want to hear from you!

Please take a minute to fill out this form and mail it to the Department of Animal and Dairy Sciences, fax it to 662-325-8873, or email it to chuntington@ads.msstate.edu. You can also update your information online by visiting us at www.ads.msstate.edu/index.html and clicking on the Alumni link. This assists us in staying in contact and updating our records.

Name (Last, First, Middle Initial) _____

Maiden name (if different from current last name) _____

Degree Awarded & Year of Graduation _____

Street Address _____

City _____ State _____ Zip _____

Phone _____ Email _____

Current Employer _____

Position _____

News to share: _____

Send to ADS, Box 9815, Mississippi State, MS 39762; Fax (662) 325-8873; or email to chuntington@ads.msstate.edu.

Support the Department of Animal and Dairy Sciences

The Department of Animal and Dairy Sciences appreciates contributions in support of its programs and facilities. The generosity of our Mississippi State alumni and friends of the department allows us to provide an outstanding educational experience for our undergraduate and graduate students. We encourage you to make a donation to the department, undergraduate or graduate scholarships, or to a specific area of your choice. If you would like to make a contribution, please send your check payable to:

MSU Foundation
Animal and Dairy Sciences Department
Box 9815
Mississippi State, MS 39762

For more information on supporting the Department of Animal and Dairy Sciences, please contact Dr. Terry E. Kiser at 662-325-3378 or tkiser@ads.msstate.edu

DATES TO REMEMBER:

Sept. 11 & 12, 2009 ADS Reunion

Sept. 26, 2009 ADS/FSNHP football tailgate

HOPE YOU JOIN US!