Animal Science Newsletter

March 2007

In This Issue...

Dates to Remember

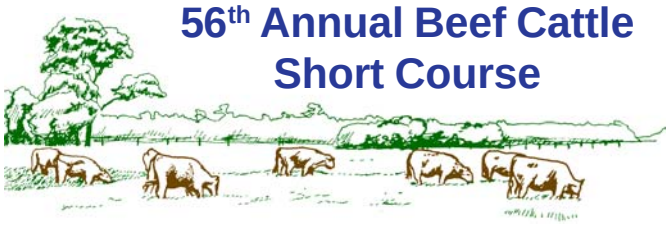
March

1	University of Georgia 15th Annual Focus on EPD's Bull Sale - Athens, GA
3	Small Farms Livestock Production Conference - Sebring, FL
3	Horse Judging Reasons Day Camp - Gainesville, FL
9-11	American Youth Horse Council Youth Horse Leadership Symposium - Denver, CO
13-15	FCA & FCW Legislative Quarterly - Tallahassee, FL
17	Small Farms Livestock Production Conference - Manatee Co. Extension Office
19	Graham Spring Open House Sale - Albany, GA
24	State 4-H Hippology Contest - Orlando, FL
27-30	NCBA Spring Conference - Holiday Inn on the Hill - Washington, DC
31	State 4-H & FFA Livestock Judging Contest - Gainesville, FL

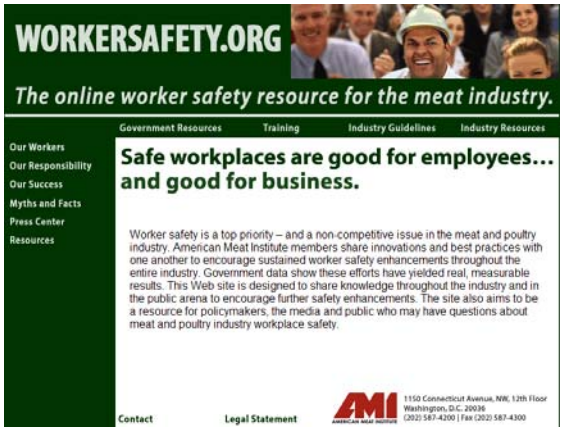
April

5	Georgia Expo Simmental Sale - Perry, GA
6	Georgia Expo Commercial Heifer Sale - Perry, GA
14	Circle B Black Bull and Female Sale (Simmental/Sim-Angus/Angus) - Uniontown, AL
14	State 4-H & FFA Horse Judging Contest - Gainesville, FL
19-21	NCBA Region II Meeting - Orlando / Kissimmee, FL
21	State 4-H & FFA Horse Judging Contest - Gainesville, FL

56th Annual Beef Cattle Short Course



Online registration is now available! Please visit http://www.animal.ufl.edu/extension/beef/BCSC.shtml



AMI Launches Worker Safety Web Site

The American Meat Institute has unveiled **workersafety.org**, a Web site to provide information for the meat industry, the public and the media about worker safety in the meat and poultry industry.

The new site offers access to a variety of government and industry resources and training materials. The Ergonomic Program Management Guidelines for Meatpacking Plants, which were developed jointly by the industry, the Occupational Safety and Health Administration and the United Food and Commercial Workers, are included. Other content includes a section highlighting the industry's success in reducing injury and illness rates, the implementation of voluntary ergonomic guidelines and a "myths and facts" section.

UF UNIVERSITY of FLORIDA IFAS Extension

Horse Genome Assembled

Data on Equine Genome Freely Available to Researchers Worldwide

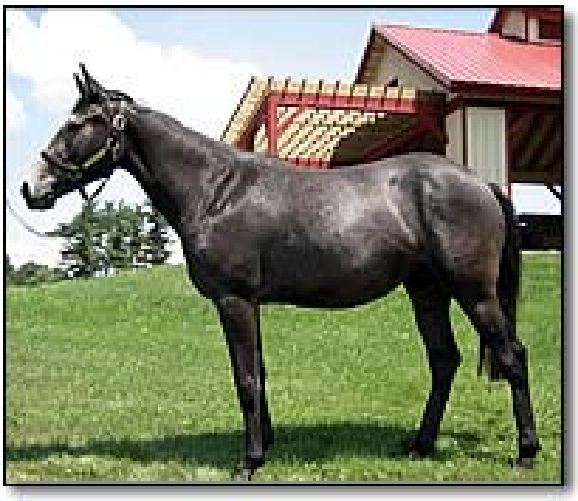
The first draft of the horse genome sequence has been deposited in public databases and is freely available for use by biomedical and veterinary researchers around the globe, leaders of the international Horse Genome Sequencing Project announced today.

The $15 million effort to sequence the approximately 2.7 billion DNA base pairs in the genome of the horse (Equus caballus) was funded by the National Human Genome Research Institute (NHGRI), one of the National Institutes of Health (NIH). A team led by Kerstin Lindblad-Toh, Ph.D., at the Eli and Edythe L. Broad Institute of the Massachusetts Institute of Technology and Harvard University, in Cambridge, Mass., carried out the sequencing and assembly of the horse genome.

Approximately 300,000 Bacterial Artificial Chromosome (BAC) end sequences, which provide continuity when assembling a large genome sequence, were contributed to the horse sequencing project by Ottmar Distl, D.V.M., Ph.D. and Tosso Leeb, Ph.D., from the University of Veterinary Medicine, in Hanover, Germany and Helmut Blöcker, Ph.D., from the Helmholtz Centre for Infection Research in Braunschweig, Germany. Production of the BAC end sequences was funded by the Volkswagen Foundation and the State of Lower Saxony.

Sequencing of the domestic horse genome began in 2006, building upon a 10-year collaborative effort among an international group of scientists to use genomics to address important health issues for equines, known as the Horse Genome Project (www.uky.edu/Ag/Horsemap/). The horse whose DNA was used in the sequencing effort is a Thoroughbred mare named Twilight from Cornell University in Ithaca, N.Y. Researchers obtained the DNA from a small sample of the animal's blood. To download a high-resolution photo of Twilight, go to http://www.genome.gov/pressDisplay.cfm?photoID=20008.

Twilight is stabled at the McConville Barn, Baker Institute for Animal Health, College of Veterinary Medicine, at Cornell University, with a small herd of horses that have been selected and bred for more than 25 years to study the mechanisms that prevent maternal immunological recognition and destruction of the developing fetus during mammalian pregnancy. The research, conducted by Cornell professor Doug Antczak, V.M.D, Ph.D., and funded by the National Institute of Child Health and Human Development, has implications in reproduction, clinical organ transplantation and immune regulation.



NHGRI-supported researchers have sequenced the genome of Twilight, a Thoroughbred mare from Cornell University in Itaca, NY.

In addition to sequencing the horse genome, researchers produced a map of horse genetic variation using DNA samples from a variety of modern and ancestral breeds, including the Akel Teke, Andalusian, Arabian, Icelandic, Quarter, Standardbred and Thoroughbred. This map, comprised of 1 million signposts of variation called single nucleotide polymorphisms, or SNPs, will provide scientists with a genome-wide view of genetic variability in horses and help them identify the genetic contributions to physical and behavioral differences, as well as to disease susceptibility. There are more than 80 known genetic conditions in horses that are genetically similar to disorders seen in humans, including musculoskeletal, neuromuscular, cardiovascular and respiratory diseases. The SNPs are available at the Broad Institute web site (www.broad.mit.edu/mammals/horse/snp) and will be available shortly from NCBI's Single Nucleotide Polymorphism database, dbSNP (www.ncbi.nlm.nih.gov/SNP).

The initial sequencing assembly is based on 6.8-fold coverage of the horse genome, which means, on

average, each base pair has been sequenced almost seven times over. Researchers can access the horse genome sequence data through the following public databases: GenBank (www.ncbi.nih.gov/Genbank) at NIH's National Center for Biotechnology Information (NCBI); NCBI's Map Viewer (www.ncbi.nlm.nih.gov); UCSC Genome Browser (www.genome.ucsc.edu) at the University of California at Santa Cruz; and the Ensembl Genome Browser (www.ensembl.org) at the Wellcome Trust Sanger Institute in Cambridge, England. The data is also available from the Broad Institute Web site (www.broad.mit.edu/ftp/pub/assemblies/mammals/horse/).

Over the next several months, researchers plan to further improve the accuracy of the horse genome sequence and expect to deposit an even higher resolution assembly in public databases. Comparing the horse and human genomes will help medical researchers learn more about the human genome and will also serve as a tool for veterinary researchers to better understand the diseases that affect equines. A publication analyzing the horse genome sequence and its implications for horse population genetics is being planned for the future.

To learn more about the expanding field of comparative genomics, go to http://www.genome.gov/11509542. A complete list of organisms and their sequencing status can be viewed at www.genome.gov/10002154.

NHGRI is one of the 27 institutes and centers at the National Institutes of Health, an agency of the Department of Health and Human Services (DHHS). Additional information about NHGRI can be found at its Web site, www.genome.gov.

The National Institutes of Health (NIH) — The Nation's Medical Research Agency — includes 27 Institutes and Centers and is a component of the U.S. Department of Health and Human Services. It is the primary federal agency for conducting and supporting basic, clinical and translational medical research, and it investigates the causes, treatments, and cures for both common and rare diseases. For more information about NIH and its programs, visit www.nih.gov.

SOURCE: National Institute of Health
http://www.nih.gov
Release - February 7, 2007

Bronson Announces Tax Break For Growers

Florida Agriculture and Consumer Services Commissioner Charles H. Bronson announced that some state cost-share payments for implementing Best Management Practices (BMPs) may be excluded from a producer's adjusted gross income for 2006 federal income tax purposes.

Bronson requested and received from the U.S. Department of Agriculture a determination that cost share payments made under a number of state conservation programs are made primarily for conserving soil and water resources, protecting or restoring the environment, improving forests, or providing habitat for wildlife.

The following BMP programs are included:

- Program for Citrus, Cow/Calf, Dairies and Other Agriculture in the Lake Okeechobee Priority Basins.
- Program for Indian River Area Citrus Groves.
- Program for Interim Measures for Tri-County Agricultural Area Farms.
- Program for Interim Measures for Florida Producers of Container-Grown Plants.
- Program for Best Management Practices for Shadehouse Grown Leatherleaf Ferns.
- Nitrogen Best Management Practices Program for Florida Ridge Citrus.
- Nitrogen Interim Measures for Florida Citrus.
- Nitrogen Interim Measures for Bahiagrass and Bermuda Grass.
- Florida Conservation Reserve Enhancement Program.

Under the Internal Revenue Service Code, cost-share payments made under these programs can be excluded from adjusted gross income if such payments are used for capital expenses and do not substantially increase the income derived from the property for which those payments are made. The IRS defines a "substantial

increase" as 10 percent or $2.50 per acre, whichever is greater.

Bronson said he intends to request from the USDA an additional determination to provide the adjusted gross income exclusion for cost-share payments made under any Florida Department of Agriculture and Consumer Services' conservation program. If successful, this change would allow for such exclusion for 2007 federal income tax purposes.

SOURCE: Ray Scott, FDACS
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Release - February 19, 2007

Ranchers Applaud Introduction of ESA Reform Bill

S.658 Aims to Strengthen Recovery Efforts with Landowner Input

Efforts to reform the Endangered Species Act (ESA) – a priority issue for U.S. ranchers – have been revived in the 110th Congress thanks to a bill that seeks to strengthen species recovery while providing for local community input.

Senators Larry Craig (R-Idaho) and Craig Thomas (R-Wyo.), who both serve on the Senate Environment and Public Works Committee, introduced the Endangered Species Reform Act of 2007 (S.658) on February 16.

Members of the National Cattlemen's Beef Association (NCBA) and the Public Lands Council (PLC) have identified the issue as a top priority for ranchers and landowners for many years.

"One of the key concerns we hear from our members is that they want more say in the listing and recovery process," says Jeff Eisenberg, NCBA's director of federal lands and executive director of the PLC. "Since ranchers are out on the land every day, they can offer a first-hand account of how a species is being managed and recovered."

For ranchers, the bill aims to put in place a number of much-needed reforms including:

- Giving impacted states a larger voice in the listing process by requiring the Secretary of the Interior to solicit assessments from those states.
- Allowing for more public comment opportunities by requiring a minimum of two hearings in each of the affected states.
- Requiring advocacy groups that petition for an ESA listing to provide information on the species that has been tested in the field, peer reviewed and published by a scientific source. Petitioners must also provide the historical and current range and distribution of the species in addition to the status and trends of all populations of that species.
- Allowing the Interior Secretary to use data observed by land owners on the status of that species.
- Requiring the Interior Secretary to prepare a recovery plan upon the proposal to list a species and for the Secretary to change the status of a species or remove the species from the list upon meeting those criteria.

"This bill provides landowners, states and federal agencies with the necessary tools to properly list and manage species under ESA," says Eisenberg. "Additionally, the bill establishes safeguards against advocacy groups who pursue ESA without solid science."

Senators Chuck Hagel (R-Neb.), Mike Enzi (R-Wyo.), and Wayne Allard (R-Colo.) are all cosponsors of the legislation. The bill has been reported to the Environment and Public Works Committee where it awaits further action.

"Ranchers are grateful to these Senators for putting forth common-sense ESA reform legislation," says Eisenberg. "This action has set the stage for discussions on ESA reform in the new Congress, and we're looking forward to participating in this dialogue."

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Release - February 21, 2007