Bovine Respiratory Disease Complex (BRDC) Coordinated Agriculture Project (CAP) #P533

Date: Monday, January 13
3:00 pm - 4:30 pm

Description:

Presenters: James Womack Texas A&M University

P533 - Bovine Respiratory Disease Complex (BRDC) Coordinated Agriculture Project (CAP)
The long-term goal of this Coordinated Agricultural Project (CAP) is to reduce the prevalence of BRD in beef and dairy cattle with resultant improvements in animal welfare and industry profitability. The research objectives are to identify genetic loci associated with BRD and use these to develop SNP-based selection tools and diagnostic tests to identify BRD genetically resistant animals. The extension objectives are to develop a sustained effort to disseminate, demonstrate, evaluate and document the impact of a range of educational outreach materials and best management practices for beef and dairy cattle producers, and feedlot personnel. The education objectives are to develop and offer distance and experimental multi-disciplinary learning approaches for undergraduate, graduate, and veterinary students studying BRD.

Almost 2000 dairy calves have been genotyped utilizing the 778,000 Illumina BeadChip assay. A case-control genome wide association analysis (GWAS) has been completed with two different statistical approaches. Significant genomic hits are illustrated with Manhattan Plots. The metagenomics study to identify novel pathogens has been initiated by collecting deep pharyngeal and mid nasal swabs from BRD and healthy calves in Tulare, California and BRD challenged animals from University of California at Davis.

All publications, presentation, abstracts, posters and press associated with this project are being compiled and made available at brdcomplex.org. Collaborators have given presentations at meetings and conferences throughout the US and internationally including American Society of Animal Science, Animal American Association of Bovine Practitioners, Conference of Research Workers in Animal Diseases, Plant and Animal Genome, National Beef Cattle Evaluation Consortium, National Association of Animal Breeders, United States Animal Health Association, and the International Committee for Animal Recording meetings.