

**18th ADSA Discover Conference on Food Animal Agriculture:
Effect of the Thermal Environment on Nutrient and Management Requirements of Cattle
Brown County Inn in Nashville, Indiana
November 2-5, 2009**

Sponsored by the American Dairy Science Association

**Tentative Program Outline
(as of 9/11/2009)**

All conference activities will be held in the Ballroom at Brown County Inn unless otherwise specified.

Monday, November 2, 2009

4:00-6:00 PM Registration

6:00 – 8:15 PM Opening Session/Welcome Reception and Dinner: Salt Creek Golf Retreat

Welcome: Larry Miller (Discover Conference Series) & Bob Collier (University of Arizona):

Welcome/Introductory Comments

Dinner Speaker: Mimi Berman (Hebrew University of Jerusalem, Israel) - Introduced by William W. Thatcher (University of Florida)

Tuesday, November 3, 2009

7:00-8:00 AM Breakfast

8:00 AM – 12:00 PM Morning Session I: Effects of Environment on Cattle Physiology

Session Leaders - Don Spiers (University of Missouri) & Terry Mader (University of Nebraska)

Don Spiers (University of Missouri) - Overview of heat stress effects on physiology

Bill Thatcher (University of Florida) - Heat stress effects on reproduction/nutrition

Discussion

9:45-10:15 Break

Terry Mader (University of Nebraska) - Heat and cold stress effects on beef cattle

Geoff Dahl (University of Florida) - Photoperiod and thermal effects during transition period

Discussion

12:00-12:30 Lunch

12:30 -2:15 PM Tuesday Afternoon Session II: Environmental Effects on Metabolism

Session Leader - Lance Baumgard (Iowa State University)

Lance Baumgard (Iowa State University) - Effects of heat stress on nutrient utilization

Richard Zinn (University of California-Davis) - Heat stress effects on nutrient requirements

Discussion

2:00-2:15 Break

2:15 – 5:30 PM Tuesday Afternoon Session III: Environmental Effects on Reproduction

Session Leaders - Pete Hansen (University of Florida) and Adele Turzillo (USDA CSREES)

Matt Lucy (University of Missouri) - Effect of heat stress on ovarian function

Zvi Roth (Hebrew University of Jerusalem) - Effect of heat stress on embryo survival

3:15-3:30 Break

Discussion

Pete Hansen (University of Florida) - Factors improving embryo survival during thermal stress

Russ Anthony (Colorado State University) - Effect of heat stress on placental function

Discussion

Wednesday, November 4, 2009

7:00-8:00 AM Breakfast

8:00 AM – 12:00 PM Wednesday Morning Session IV: Population Genetics of Resistance to Environmental Stress

Topic Leader - Bill Thatcher (University of Florida)

Ignacy Misztal (University of Georgia) - Genotype by environment interaction

Curt Van Tassel (USDA, ARS) - Identifying markers associated with thermal tolerance

Discussion

10:00-10:15 Break

Chad Chase (USDA, ARS, STARS) - Identification of traits associated with thermal tolerance
Panel Discussion

12:00-1:00 Lunch

1:00 – 4:30 PM Wednesday Afternoon Session V: Functional Genomics of Environmental Effects

Discussion Leader - Pete Hansen (University of Florida)

Pete Hansen (University of Florida) & Bob Collier (University of Arizona) - Molecular basis of Breed Differences in Heat Tolerance Effect of thermal stress on gene networks
Cong-Jun Li (Animal and Natural Resources Institute) - Epigenetics and environmental effects
Discussion

2:30-3:00 Break

Rob Rhoads (University of Arizona) - Effects of thermal stress on genes regulating cellular metabolism
Panel & Discussion

Thursday, November 5, 2009

7:00–8:00 AM Breakfast

8:00 AM – 12:00 PM Thursday Morning Session V: Environmental Management

Topic Leaders - Terry Mader (University of Nebraska) and Bob Collier (University of Arizona)

Leroy Hahn (USDA USMARC) - Overview of progress in reducing environmental effects on cattle
John Smith (Kansas State University) - Housing systems to reduce environmental impacts on lactating dairy cows
Discussion

9:30-10:00 Break

John Gaughan (The University of Queensland Gatton) & Terry Mader (University of Nebraska) – Heat stress indices for management decisions
David Wolfenson (Hebrew University of Jerusalem, Israel) - Improving fertility during and after thermal stress
Wrap-up & Discussion

12:00 PM Adjourn