Ron's Impact on the World Dairy Industry

Strong Academic Pedigree
- Reg Gomes
- Paul Malven
- Ernst Knobil

Published scientific papers involving 12 different species or types within species

Ron, the Animal Scientist
- Four top universities
- Mentor to students
- Colleague to many
- Effective leader
- Friend
- Humble

Ron and Jack's Happenstance, 1993
- Amsterdam
- JFK
- Atlanta

Stacy Butler and Stephanie Britt, Class of 1996
Cornell University Hotel School
**Energy Balance and Ovulation**

Original graphs are Figures 4 and 5 from Butler and Smith. 1989. J. Dairy Sci. 72:767-783.

![Graphs showing Energy Balance and Ovulation](image)

**Example: How does weight loss affect fertility of a cow's eggs?**

"Britt Hypothesis" Here's what we observed:

- Maintained = 62% CR
- Lost = 25% CR

Here's a diagram of our hypothesis.

![Diagram of Britt Hypothesis](image)

**The Britt Hypothesis: 25 years later...**

![The Britt Hypothesis: 25 years later...](image)

In the future:

1. Selection for cows that don’t lose weight (Israel scientists, 2017)
2. Bulls will be indexed on daughter “robustness” (Swiss scientists, 2017)

![Cows of the future: Less weight loss, metabolically robust](image)
Dietary Fat and Postpartum Follicle Growth

Adding fat caused more first PP follicles to ovulate.

Protein Intake and Fertility

Impact on Students and Colleagues

Butler’s attention to and interest in the lives of his students led to his selection in 1997 by the CALS Alumni Association for its Outstanding Alumni Award.

Animal Science at Cornell University 1963-200, Observations and Reflections from an Insider. John Murray Elliot
Milk Urea Nitrogen (MUN) is measured in milligrams per deciliter (mg/dl) i.e. grams per 100 liters. This low concentration makes accurate testing for differences in urea much more difficult.

Development on DART began in 1979. Over the years, DART expanded to PCDART and addressed the need for better information (reproductive/health changes, bST, prostaglandin, body condition scores, heifer growth, herd...)

The first day of each rotation will consist of:
- Orientation: Discuss learning objectives, provide list of reading materials:
  - Pioneer Forage Manual: A Nutritional Guide (Yours to keep)
  - Working with DairyComp305 – A brief primer
  - Body Condition Scoring - Body Condition Scoring Worksheet
  - Particle Size Separator Worksheet
  - Vaccination Program Worksheet
  - Milk and Dairy...

Industry Responses to Ron’s Research

Industry Responses to Ron’s Research

Audience Participation

Raise your RIGHT hand......

if you have ever dealt with how much protein to feed to dairy cows.
Audience Participation

Raise your LEFT hand......

if you have ever dealt with negative energy balance in dairy cows.

Audience Participation

Stand and Clap your hands

if you have benefitted from the research and outreach of Ron Butler.

Thank You Ron!