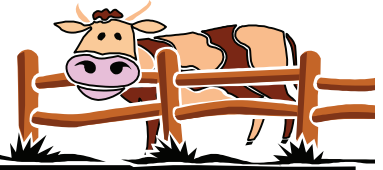


DAIRY *Update*



Late Winter/Early Spring 2005

University of Idaho Dairy Research Update

Q: What is the effect of clinical mastitis and other diseases on reproduction?

A: Data from 963 lactating Holstein cows was collected from cows that calved between June 2001 and October 2003. Retrospectively, cows were divided into four groups: cows with clinical mastitis with other diseases, cows with clinical mastitis only, cows with diseases other than mastitis, and healthy cows. Services per conception and days open were significantly higher for cows with clinical mastitis and other diseases, and cows with clinical mastitis only, as compared to cows with diseases other than mastitis and healthy cows. The rate by which animals became pregnant over time was significantly lower for cows with clinical mastitis with other diseases, cows with clinical mastitis only, and cows with diseases other than mastitis compared to healthy cows. Moreover, the proportion of cows that remained open by 220 DIM was higher in cows with clinical mastitis with other diseases and cows with clinical mastitis only compared to healthy cows. Nevertheless, days to first service were not different among groups, which was most likely due to intense programmed breeding.

Take Home Message

- ◆ Reproductive efficiency was decreased by the presence of clinical mastitis in that a greater proportion of cows with mastitis remained non-pregnant over time.
- ◆ The negative effects on reproduction were exacerbated when cows experienced both clinical mastitis and other diseases.
- ◆ The cost of mastitis exceeds the associated milk loss, increased labor, drugs and veterinary costs as mastitis has a detrimental effect on reproduction and the profitability of dairy herds.

For more information please contact Dr. Amin Ahmadzadeh at amin@uidaho.edu or (208) 885-7409.

(Adapted from F. Frago, A. Ahmadzadeh, and J.C. Dalton)

UI and Korean Researchers Target Mastitis Caused by *Staphylococcus aureus*

Sponsored by the United Dairymen of Idaho, National Institutes of Health, and the U.S. Department of Agriculture, UI microbiologist and Idaho Agriculture Experiment Station Director Dr. Greg Bohach is working with Dr. Yong Ho Park, a colleague at Seoul National University, to target mastitis caused by *Staphylococcus aureus* bacteria. *Staphylococcus aureus*, a major cause of mastitis, produces toxins, resulting in decreased milk production and increased somatic cells in milk. A defanged toxin developed by UI and Seoul National University researchers, focuses on stimulating cows' immune systems to combat *Staphylococcus aureus* bacteria as well as the elevated milk somatic cell count caused by bacterial toxins. Recently, the University of Idaho Research Foundation and LG Life Sciences Ltd. of South Korea celebrated the licensing of the modified toxin technology to combat mastitis caused by *Staphylococcus aureus*. Further research in dairy herds is necessary before the product becomes available to dairy producers.

UI Dairy Symposium

The UI Dairy Club recently sponsored "The 2nd Annual UI Dairy Symposium" in Moscow. Speakers and topics included:

- Joe Dalton, Ph.D.: "Managing reproduction for greater profitability"
- Mark Wustenburg, DVM: "Practical management of milk quality"
- Andy Werkhoven, dairy producer: "Procedures and protocols on the farm, so what?"
- Travis Hanson, Ph.D.: "The joy of being a dairy nutritionist"

Over 50 students and faculty attended the symposium. The symposium extended the learning experience of undergraduate, graduate, and veterinary students beyond the traditional classroom through interaction with industry leaders.

New UI Dairy Production Medicine Veterinarians

Dr. Ricardo Chebel is the new Dairy Production Medicine Veterinarian at the Caine Veterinary Teaching Center in Caldwell. Dr. Chebel recently completed a Master's in Preventative Veterinary Medicine at the University of California, Davis, Veterinary Medicine Teaching and Research Center in Tulare, CA. Dr. Chebel's expertise is in reproduction and embryo transfer. Contact Dr. Chebel at rchebel@uidaho.edu or (208) 454-8657.

Dr. Chris Schneider has recently joined the faculty at the University of Idaho in Moscow. Dr. Schneider is teaching in the Animal and Veterinary Science Department at the University of Idaho and the Washington State University Veterinary School. Dr. Schneider, a graduate of UI (B.S.) and Washington State University (M.S., DVM), recently worked as a veterinarian in a Tulare, CA practice. Contact Dr. Schneider at cschneid@uidaho.edu or (208) 885-6345.

New! For Employees ...

The transition period and cow fertility

Cow fertility is directly related to health during the early postpartum period. Factors negatively influencing the resumption of cyclicity include drastic changes in body condition during the dry period and early postpartum, milk fever, ketosis, displaced abomasum, ruminal acidosis, retained placenta, metritis, ovarian cysts, and lameness. It is imperative for producers to implement effective transition cow management programs to prevent these problems, and monitor fresh cows daily for up to 10 days after calving. Fresh cow monitoring must be done by trained personnel and should include, at a minimum, 1) daily rectal temperatures, 2) visual observation of each cow's disposition (including whether or not she's eating), 3) evaluation of uterine discharge, and 4) when necessary, using a stethoscope to check for a right or left displaced abomasum (RDA or LDA). Should problems occur, cows must be treated as quickly as possible. Typically, cows that experience a postpartum problem will have 50% lower conception rates than that of normal cows.

Reference: Dalton, J.C., A. Ahmadzadeh, and R. Chebel. 2004. Reproductive management in large dairies. In: Expo Leche and V World Dairy Congress, Acapulco, Mexico, pp. 68-82.

Nuevo! Para los empleados ...

El periodo de transición y la fertilidad de las vacas

La fertilidad de las vacas está relacionada directamente con la salud durante el periodo temprano post parto. Los factores que influyen negativamente en la reanudación de la ciclicidad incluyen cambios drásticos en condición corporal durante el periodo seco y periodo post parto temprano, fiebre de leche, cetosis, desplazamiento de abomaso, acidosis ruminal, retención placentaria, metritis, ovarios quísticos y cojeras. Es imperativo que los productores pongan en práctica programas eficaces para vacas en transición para prevenir estos problemas. También es indispensable monitorear a las vacas recién paridas diariamente hasta por diez días después del parto. El monitoreo de las vacas recién paridas debe ser realizado por personal entrenado y debe incluir, como mínimo: 1) Medición diaria de temperatura rectal, 2) Observación visual de la disposición individual de cada vaca (incluyendo si está o no comiendo), 3) Evaluación de la descarga uterina, y 4) Cuando sea necesario, usar un estetoscopio para revisar si hay un desplazamiento de abomaso a la derecha o a la izquierda. Si ocurrieran problemas, la vaca debe ser tratada tan rápido como sea posible. Típicamente, las vacas que muestran un problema post parto tendrán tasas de concepción 50% más bajas que las vacas normales.

Referencia: Dalton, J.C., A. Ahmadzadeh, y R. Chebel. 2004. Manejo reproductivo en grandes hatos lecheros. En: Expo Leche and V Congreso Mundial de la Leche, Acapulco, Mexico, páginas 68-82.

Dairy Update is compiled by Joseph C. Dalton, Asst. Professor and Extension Dairy Specialist for the University of Idaho Department of Animal and Veterinary Science. For more information, contact Dr. Dalton at the Caldwell Research and Extension Center, 16952 S. Tenth Avenue, Caldwell, ID 83607, (208) 459-6365, jdalton@uidaho.edu.



Extension Dairy Specialist

Cooperative Extension System
U.S. Department of Agriculture
University of Idaho
16952 S. Tenth Avenue
Caldwell, ID 83607

AN EQUAL OPPORTUNITY EMPLOYER



DAIRY *Update*

A cartoon illustration of a brown and white cow standing behind a wooden fence, positioned to the right of the word "Update" in the title.

Coming Events

International Dairy Federation Mastitis Conference, Maastricht, The Netherlands, June 12-15. For more information: www.fil-idf.org/mastitis2005/

American Dairy Science Association-American Society of Animal Science Annual Meeting, Cincinnati, OH, July 24-28. For more information: www.fass.org/2005/