



UNIVERSITY OF CALIFORNIA COOPERATIVE EXTENSION  
 KINGS COUNTY  
**DAIRY NOTES**



May 2007

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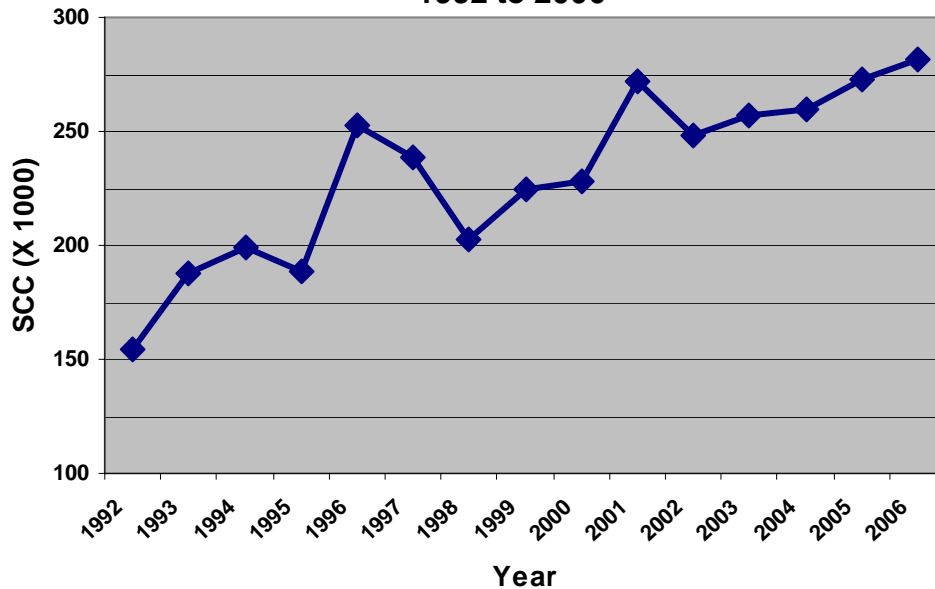
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**What's Up? Somatic Cell Counts!**

Somatic Cell Count (SCC) is the most widely accepted criterion for measuring udder health and milk quality in all major milk producing countries. SCC is an indicator of inflammation of the mammary gland, and the primary cause of inflammation is bacterial infection. For a number of years, the SCC of herds in Kings County DHIA has been creeping upward. Figure 1 shows the average SCC of Kings County DHIA dairies each year from 1992 through 2006.

**Figure 1.**  
**Average SCC by year for Kings County DHIA**  
**1992 to 2006**



Nationally, SCC for all herds enrolled in DHIA was 288,000 in 2006 – nearly the same as for Kings DHIA’s average SCC of 282,000. But the national average has been trending downward for the last five years. So why is our SCC trending up? We can be fairly certain that the increased SCC is due to increased infection, but it is not so easy to determine the reason for that. What has occurred during the past 15 years that might explain the trend?

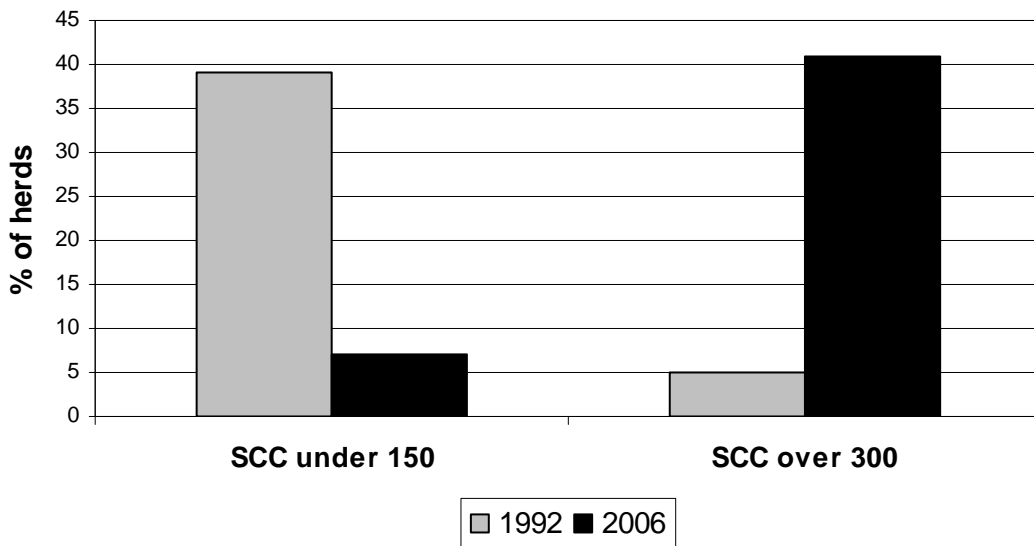
We have seen increased herd size and milk yield per cow, but that is a phenomenon that has been occurring for decades, not just the last 15 years. And in fact, larger herds tend to have lower SCC. Another change is the DHIA structure. Herds are not limited by county boundaries anymore. Kings DHIA has welcomed many herds from other counties, and some of our local herds are now members of other DHIA’s. But we didn’t just see good herds leave and poor herds join. Some of our lowest SCC herds are from other counties. Another new development is

Posilac (bovine somatotropin or BST), which was approved by the US Food and Drug Administration in 1993. Commercial use began in 1994. Opponents of that technology argue that it increases stress and thus SCC in treated cows. Or that using it to prolong lactation means that more late lactation cows in the herd are contributing to higher SCC. But the fact is that even though older cows and those in late lactation may have higher SCC – the reason for the increase is an infection of one or more quarters of the udder. Factors other than infection status have little impact on SCC.

What is the herd infection level at various bulk tank SCC levels? One important study showed a linear relationship between bulk tank SCC and the percent of quarters infected with major mastitis pathogens. For a bulk tank SCC of 200,000 the percent of infected quarters in the herd would be 6% and for 400,000 SCC in the bulk tank, 13% of quarters would be infected. At 750,000 and 1 million SCC in the bulk tank, the levels would be 24% and 33% of quarters in the herd infected. The regulatory SCC limit in the US is 750,000; for California the limit is 600,000 and for many other milk producing countries the limit is 400,000.

Figure 2 shows the percent of herds in Kings DHIA with SCC under 150,000 and the percent of those with SCC over 300,000 for two different years – 1992 and 2006. This chart clearly shows a change. Fifteen years ago, almost 40% of herds had SCC of 150,000 or less – last year only 7% of herds could make that claim. And in 1992, only 5% of herds had SCC over 300,000. Last year over 40% of herds had more than 300,000 SCC.

**Figure 2.**  
**Percent of Herds in High and Low SCC Categories**  
**1992 and 2006**



So what's up with your herd? If the answer is SCC, remember: *factors other than infection status have little impact on SCC.* What organism is causing the infections and how is it spreading? Look in the milking parlor and housing areas. Review proper milking protocols with employees. Review milking system performance. Monitor teat end condition. Make sure freestalls and corrals are kept dry, clean and comfortable. Efforts to reduce SCC can be time consuming, tedious and never ending, but the rewards can be great - healthier udders, higher milk yield and quality bonuses.

## **Drag-Line Liquid Manure Injection Demo, Hanford – May 1<sup>st</sup>**

Manure will be the subject of a field day that will include a demonstration of a liquid manure injection system at Longfellow Dairy near Hanford on Tuesday, May 1<sup>st</sup> from 9:30 AM until noon. The location is 14782 8<sup>th</sup> Ave. To get there, exit west on Idaho Ave. from Highway 43 (about 5 miles south of Highway 198).

Following is an agenda for the program:

**9:30 Introduction** – Bill and George Longfellow, Hosts

**9:40 Industry perspective** – Kevin Abernathy, California Dairy Campaign

**9:55 Air district requirements** – Sheraz Gill, San Joaquin Valley Air Pollution Control District

**10:10 New developments** – Carol Collar, UC Cooperative Extension, Kings County of Kings

**10:25 Cost share opportunities**- NRCS State Air Quality Coordinator and Kings County Staff

**10:35 Introduction of NRCS Manure Management Program & Conservation Nutrient Management Program** – Aziz Raman and Richard Cernansky

**10:50 Manufacturer's presentation**

**11:00 Equipment demonstration**

## **Mastitis and Milk Quality Conference, Visalia- May 22-23**

The National Mastitis Council will hold its 2007 Regional Meeting on May 22-23 at the Holiday Inn Conference Center in Visalia. The meeting will highlight mastitis control and overall milk quality improvement. Topics include milk culture systems, fresh cow mastitis screening and treatment, freestall bedding management, mastitis in heifers, mycoplasma mastitis, using SCC data, and reproductive effects of mastitis.

The meeting will begin with an optional, pre-conference short course on Herd Manager Training. This short course will provide herd managers with practical information about mastitis, what it is, and how they and their fellow workers can have an impact on controlling mastitis in the herds within which they work. The course, which will be held from 1:00 p.m. - 5:00 pm on Tuesday, May 22<sup>nd</sup>, has limited enrollment and requires pre-registration. A California wine and cheese tasting social will be held on Tuesday evening.

On Wednesday, May 23<sup>rd</sup>, the main program will begin at 9:30 a.m. Those interested in learning more about the program content and registration information are encouraged to go to [www.nmconline.org](http://www.nmconline.org) for more information. If you have questions, contact Carol Collar, UC Cooperative Extension farm advisor in Hanford, CA (559-582-3211 ext. 2730) or Anne Saeman, NMC executive director in Madison, WI (608.846.4615).

NMC is a not-for-profit professional organization devoted to reducing mastitis and enhancing milk quality. NMC promotes research and provides information to the dairy industry on udder health, milking management, milk quality, and milk safety. Founded in 1961, NMC now has close to 2,000 members in more than 40 countries throughout the world. NMC is headquartered in Verona, Wisconsin, located just outside of Madison, the capital of Wisconsin.

## **Frost Injury to Corn Evident in Some Corn Fields**

UC Cooperative Extension farm advisors in Kings and Tulare counties observed symptoms of frost injury in several corn fields April 18<sup>th</sup> – 20<sup>th</sup>. Damage on affected leaves appeared first as water-soaked tissue that soon turned dark. Days later, the leaves turned a bleached tan color. In some cases large areas of a field were affected and in others it was just scattered plants. Top leaves were most affected and new leaves in the whorl appeared healthy. Later planted fields with shorter plants showed less damage. Inspecting the internal parts of the stem helped determine whether plants had been killed. In most cases, the tissue of the internal growing point appeared healthy, but in some instances, it was watery brown, indicating the plants had little chance of recovery. Now that a week has passed since the cold snap, healthy new leaves are pushing up through the dead top leaves. In some areas where damage was severe, the new leaves may have difficulty emerging from the tangled dead leaves. These plants may die, or some yield loss will result. For further information, contact your local UC Cooperative Extension farm advisor, Carol Collar in Kings 559-582-3211 ext. 2730; or Carol Frate in Tulare at 685-3303.

### **Corn Production Meeting, Tuesday, June 5 – Tulare (AM) and Merced (PM)**

UC Cooperative Extension farm advisors in the San Joaquin Valley have planned an educational program that should be of interest to corn growers. Regardless of whether corn is a new crop for you, or you have been growing it for years, you won't want to miss this great opportunity to learn the latest about managing your crop. The same program will be offered at two locations:  
**8:30–11:30 AM** at the **Tulare** County UCCE Office (Registration at 8 AM) **OR**  
**1:30–4:30 PM** at the **Merced** County UC Cooperative Extension Office (Registration at 1 PM)

#### **Program**

**Corn Growth and Development** – Carol Frate, Agronomy Farm Advisor, UCCE, Tulare  
**Corn Leafhopper and Corn Stunt Disease in the San Joaquin Valley** – Charles G. Summers, Entomologist, UC Davis and Kearney Agricultural Center, Parlier  
**Management of Spider Mites and Insect Pests in Corn** – Larry Godfrey, Extension Entomologist, University of CA, Davis  
**Fusarium Ear Rot and Stalk Rot** – Mike Davis, Extension Specialist, Plant Pathologist, University of CA, Davis  
**Nutrient Uptake in Corn** – Marsha Campbell-Mathews, Agronomy Farm Advisor, UCCE, Stanislaus  
**Relative Value of Corn Harvest Options (Silage, Earlage, Grain)** - Shannon Mueller, Agronomy Farm Advisor, UCCE, Fresno  
**Yield and Nutritional Value of Grain-type versus Forage-type Sorghum for Silage** -Carol Collar, Dairy Farm Advisor, UCCE Kings

**No pre-registration required. No fee to attend.**

*For additional information, contact:*

Carol Frate (Tulare County) – (559) 685-3303

Jerry Higginbotham or Shannon Mueller (Fresno County) – (559) 456-7285

Carol Collar (Kings County) – (559) 582-3211

Marsha Campbell-Mathews (Stanislaus County) – (209) 525-6800

## *Dairy Cattle Reproduction – Short Course – June 20 & 21, 2007*

### **California Agricultural Technology Institute Center for Irrigation Technology California State University, Fresno**

This 2-day course is designed for dairy herdsmen that are currently active in the reproductive program on dairies. It is designed to a review and update on the latest reproduction techniques and strategies for maintaining a high level of reproductive efficiency on dairies.

Cost is \$75.00 per person. Additional employees from the same dairy will be \$60.00.

Registration fee includes lunch, course materials and refreshments.

**Register on-line and pay by credit card at: <http://cefresno.ucdavis.edu/Dairy>**

#### *Wednesday – 06/20/07*

**1:00 PM - Basic Principles of Reproductive Cycles of Lactating Dairy Cows and Heifers.** Jon Robison, California State University, Fresno.

**2:00 PM - Factors Affecting Reproductive Efficiency of Lactating Dairy Cows.** Jose E. P. Santos, University of California Davis.

**2:50 PM - Break**

**3:00 PM - Factors Affecting Reproductive Performance of Dairy Heifers.** Ricardo C. Chebel, University of California Davis.

**3:40 PM - Artificial Insemination – Review of Principles and Procedures.** Julian Casas, Veterinary Medicine Teaching and Research Center, University of California Davis.

**4:30 PM - Wet Labs** (Ricardo C. Chebel, Julian Casas, and Joao Lima):

- Artificial Insemination
- Ultrasonography
- 5:30PM - Adjourn

#### *Thursday – 06/21/07*

**1:00 PM - Synchronization Protocols for Lactating Dairy Cows. When to use them and where can they go wrong?** Ronaldo L. A. Cerri, University of California Davis.

**2:00 PM - Heifers Synchronization Programs: Reproductive and Economic Considerations.** Ricardo C. Chebel, University of California Davis.

**2:50 PM - Break**

**3:00 PM - Analyzing Reproductive Efficiency Data: Where am I and where should I be?** Jose E. Santos, University of California Davis.

**3:50 PM - Use of Early Pregnancy Diagnosis Tests and Ultrasonography: Is there a place for new technology in your dairy?** Ricardo C. Chebel, University of California Davis.


**4:30 PM - Wet Labs** (Ricardo C. Chebel, Julian Casas, and Joao Lima):

- Artificial Insemination
- Ultrasonography
- 5:30 PM - Adjourn

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- *Mastitis and Milk Quality Conference, Visalia- May 22-23*
- *Frost Damage on Early Planted Corn*
- *Corn Production Meeting, Tulare – June 5<sup>th</sup>*
- *Dairy Cattle Reproduction Shortcourse - CSUF, Fresno, June 20-21*

*Carol Collar, UC Cooperative Extension Farm Advisor, Kings County*

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