KANSAS DAIRY EXTENSION NEWS
VOLUME 13 (5) OCTOBER-DECEMBER 1992

KSU DAIRY DAY
OCTOBER 30TH
WATCH DAYS OPEN

SCC AND PROFIT
Reproductive efficiency is mostly determined on the performance of cows that have been bred. Parameters include calving interval, services per conception, days dry and age of calving for heifers. Cows not yet bred - OPEN COWS - may also contribute to lower reproductive performance. Without adequate records these open cows may be overlooked and contribute to "hidden" or insidious losses.

Table 1. Average Days Open in Pregnant and Open Cows and Percent of Herd Not Bred in Kansas Holstein Herds Grouped by Rolling Herd Average (RHA) (1991).

<table>
<thead>
<tr>
<th>RHA (lb)</th>
<th>Pregnant Days Open</th>
<th>% of herd</th>
<th>Not bred Days Open</th>
</tr>
</thead>
<tbody>
<tr>
<td>12,715</td>
<td>135</td>
<td>41</td>
<td>138</td>
</tr>
<tr>
<td>15,924</td>
<td>130</td>
<td>32</td>
<td>90</td>
</tr>
<tr>
<td>17,580</td>
<td>130</td>
<td>34</td>
<td>87</td>
</tr>
<tr>
<td>19,978</td>
<td>128</td>
<td>30</td>
<td>70</td>
</tr>
</tbody>
</table>

Although a negative relationship exists between production and reproduction, Managers of higher producing herds apparently overcome this inverse effect by initiating procedures to get cows serviced earlier in the postpartum period. Synchronization programs are available to minimize cows open that should be bred.

Table 2. Percent of Herd Open by Average Days Open in Kansas Holstein Herds Grouped by Rolling Herd Average (RHA) (1991).

<table>
<thead>
<tr>
<th>RHA (lb)</th>
<th>Percentage of cows open</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&lt; 60 d</td>
</tr>
<tr>
<td>12,715</td>
<td>43</td>
</tr>
<tr>
<td>15,924</td>
<td>57</td>
</tr>
<tr>
<td>17,580</td>
<td>54</td>
</tr>
<tr>
<td>19,978</td>
<td>60</td>
</tr>
</tbody>
</table>

A recent study was conducted to determine the effect of yearly production per cow on days open and percent of cows open. Research has indicated a negative genetic relationship between production and reproduction. Kansas Holstein herds (N = 463) were ranked by rolling herd average (RHA) for milk and grouped by quartile.

Table 1 shows no differences among herds in days open for pregnant cows. However, there was a favorable relationship between RHA and cows not yet bred. As production increased both the percent of herd open and the average days open declined.

A similar positive relationship was seen when herds were grouped according to RHA and open cows categorized by average days open. Higher producing herds have fewer cows open beyond 60 days and particularly beyond 120 days.
KANSAS MASTITIS COUNCIL

The Kansas Mastitis Council (KMC) was organized in 1970 "to promote educational activities and research in mastitis control."

KMC sponsors the Quality Milk Awards, Basic Milker's School and programs at the annual meeting. Since 1986, the annual meeting has been a part of KSU Dairy Day. The 1992 Dairy Day focuses on Waste Management and is sponsored in part by KMC.

KMC annual dues are $3 for individuals and $25 for companies. Your dues are used to sponsor the Council's activities. You are encouraged to join the KMC and play an important role in shaping the future of the Kansas Dairy Industry and the marketing of high quality milk.

THE 1992 ANNUAL KSU DAIRY DAY

SEVENTH IN THE SERIES - MANAGING HIGH PRODUCING HERDS:
WASTE MANAGEMENT ON DAIRIES

Pottorf Hall - CICO Park (Riley County Fairgrounds)
From KSU SPORTS COMPLEX: 1 MI W ON KIMBALL
.4 MI S ON WREATH, .2 MI W ON ROBINSON

FRIDAY, OCTOBER 30, 1992

6:00 a.m. REGISTRATION - VISIT EXHIBITS*

10:00 a.m. WELCOME
Dr. Jack Riley, Head, ASI, KSU

10:15 a.m. TODAY'S CHALLENGES
John Shirley, KSU

10:20 a.m. MINI RESEARCH UPDATES
Heifer Rearing - J.L. Morrill, KSU
Reproduction - J.S. Stevenson, KSU
Nutrition - J.E. Shirley, KSU

10:50 a.m. WASTE MANAGEMENT - Regulations and Problems in Kansas
J.P. Harner, Kansas State University

11:20 a.m. IMPACT OF ENVIRONMENTAL REGULATIONS ON DAIRY PRODUCERS
Dr. Charles Fulhage, University of Missouri

NOON LUNCH, Courtesy of Exhibitors

1:15 p.m. KANSAS QUALITY MILK AWARDS
J.R. Dunham, KSU

1:30 p.m. DAIRY WASTE MANAGEMENT: Problems and Solutions
Dr. Charles Fulhage, University of Missouri

2:15 p.m. QUESTIONS/ANSWERS

2:30 p.m. ADJOURN - VISIT EXHIBITS*

3:00 p.m. TOUR - DAIRY TEACHING AND RESEARCH CENTER

A special "thanks" to the exhibitors who support KSU Dairy Day.

Yes, I'd like to join the Mastitis Council.
Enclosed is:

$3 (self) $25 (company)

Complete name and address:

Return to: John E. Shirley, Dept. of AS&I,
Call Hall, KSU, Manhattan 66506-1600
The Kansas Mastitis Council, in cooperation with West Agro, Inc., is sponsoring an awards program to recognize Kansas producers.

Requirements

Contestants must fill out the entry form, showing the WMT or ESCC, Bacteria (SPC) and Antibiotic tests for the period of August 1, 1991 through July 31, 1992. Four tests are required during any 6-month period.

Awards

The competition will be split into two divisions according to herd size: Large herd division - 60 or more cows and Small herd division - 59 or fewer cows. The following awards will be made:

• Lowest yearly average WMT or ESCC and bacteria count in both divisions will receive a plaque.

• Second lowest yearly average WMT or ESCC and bacteria count in both divisions will receive a plaque.

• Third lowest yearly average WMT or ESCC and bacteria count in both divisions will receive a plaque.

• CERTIFICATES OF MERIT will be presented to all entrants with an average WMT under 10 mm or ESCC under 300,000 and bacteria counts averaging 10,000 or less.

Send results on this form to:

Dr. John E. Shirley
Call Hall, KSU
Manhattan, KS 66506-1600
Entry Deadline: October 19, 1992
SOMATIC CELL COUNT INVERSELY RELATED TO POTENTIAL PROFITS IN DAIRYING

Herd average Somatic Cell Count (SCC) is inversely related to potential profit in a dairy herd due to the relationship of SCC to mammary infections. As SCC increases, more mastitis occurs resulting in lower milk production, higher treatment costs, more dumped milk and more cows culled. A recent summary indicated that SCC average and Rolling Herd Average (RHA) are inversely related. Most SCC problems can be resolved with improved management.

A Dairy Herd Improvement Association (DHIA) summary of Kansas Holstein herds grouped according to RHA shows in Table 1 that SCC, SCC Linear Score and loss due to SCC decreases as RHA increases. This summary also indicates potential causes of higher SCC in lower producing herds.

First lactation SCC averages are a good indication of the level of mastitis in heifers entering the herd. Heifers should be free of mastitis at freshening with a SCC average less than 100,000. Lower producing herds exceed this level which indicates many herd SCC problems are related to too many heifers freshening which are already infected with mastitis.

Table 1 also shows that SCC average is lowest in first lactation cows in all production groups. If first lactation SCC is too high, then the herd average SCC will likely be too high since the SCC increases in succeeding lactations. Many herds could markedly reduce their SCC if the heifers entered the herd with low SCC.

The most likely reasons for heifers freshening with high SCC are: (1) becoming infected in a pond during late gestation, (2) becoming infected due to poor sanitation in the springer pen, and/or (3) becoming infected due to poor control of flies. A similar sort of a problem is indicated by the high SCC of all early lactation cows. In many herds bred heifers and dry cows are kept together in a pasture and the springing cows and heifers are in the same springer pen. Some herds could go a long ways toward solving their SCC problem by improving the environment for the bred heifers and dry cows.

All production groups have lower SCC averages when in milk <50 days as compared to >300 days in milk. This indicates some improvement in level of mammary infection is occurring due to dry cow treatment. However, lower producing herds' SCC is still too high which indicates too many cows are becoming reininfected with mastitis-causing bacteria near the time of freshening.

Another conclusion which can be drawn from the summary is that higher producing herds' SCC do not increase as much during lactation as lower producing herds. This indicates increased rate of mammary infections due to: (1) poor milking techniques including sanitation, (2) milking equipment which is operating inadequately, (3) poor environmental conditions, and/or (4) damage to teat ends caused by warts. Any herd experiencing an increase of more than 150,000 SCC as cows go from early lactation to late lactation should review these conditions.

In conclusion, SCC affects productivity of a dairy herd and thus potential profit. Almost all SCC problems can be solved by management. The DHIA SCC program is very useful for evaluating the situation in a dairy herd for solving SCC problems.

Table 1. Comparison of Rolling Herd Average Groups to Somatic Cell Count, Linear Score, and Losses in Dairy Herds.

<table>
<thead>
<tr>
<th>RHA</th>
<th>Linear Score</th>
<th>Loss/Cow/Day</th>
<th>SCC Averages (.000)</th>
<th>--Lactation Number--</th>
<th>Stage of Lactation (Days)</th>
</tr>
</thead>
<tbody>
<tr>
<td>13084</td>
<td>3.9</td>
<td>$0.37</td>
<td>483</td>
<td>277</td>
<td>375</td>
</tr>
<tr>
<td>15737</td>
<td>3.5</td>
<td>$0.31</td>
<td>402</td>
<td>255</td>
<td>333</td>
</tr>
<tr>
<td>17762</td>
<td>3.2</td>
<td>$0.24</td>
<td>317</td>
<td>205</td>
<td>268</td>
</tr>
<tr>
<td>20187</td>
<td>2.9</td>
<td>$0.18</td>
<td>262</td>
<td>183</td>
<td>227</td>
</tr>
</tbody>
</table>
NEW EBS-MORE REVISION

The September 1992 EBS update is now on line. There are numerous revisions that enhance the usefulness of EBS-MORE in dairy herd management. Finally, Option 15 - General Herd Health Practices is available as an extra cost option. Information such as treatment, condition, comments, attending technician, costs and days milk withheld can be entered for each animal. Dates for treatment/condition can be entered as far back as 1 January 1985 to the present sample date. The health data is transmitted to the DRPC for storage and periodic summarization. The cost of Option 15 is $0.02/record transmitted. Your DHIA supervisor has all the details of Option 15 and other revisions.

Body Condition Scores (BCS) can now be recorded in the EBS program. It is suggested that BCS be recorded at calving, at first breeding, 60 days prior to dry off and again at dry time.

User Defined Reports (UDR) have been expanded from 15 to 45 possibilities with the September revision of EBS-MORE.

FALL BREED MEETINGS

Most of the breed organizations have meetings in the fall to conduct business and plan activities. Listed below are dates and places along with a contact person. Plan to attend and participate in your association's affairs.

October 18  Kansas Ayrshire Ass'n, 10:00 am, Barnstormer Cafe, Goessel. Keith Burgess (316-543-6449)

October 24  Kansas Jersey Cattle Club, 11:00am, Manhattan Holidome. Mike Frey (913-765-3759).

October 30  Kansas Milking Shorthorn Society, 6:30pm, Hickory Gables, Hutchinson. Pat Lisenby (316-463-2374).

November 21 Holstein Ass'n of Kansas, 10:00am, Great Bend Holiday Inn. Shari Strauss (913-238-8899).

November 30 Kansas Interbreed Dairy Council, 10:00am, Manhattan Holidome. Harold Scanlan (913-263-4358).

January 2  Kansas Brown Swiss Ass'n, 10:30am, (to be announced), Hutchinson. Wanita Schrag (316-327-4169).

Dear Producer:

Waste Management - K-State Dairy Day's theme - is a timely topic of interest to all producers and agri-business leaders. Some 30 exhibitors will again provide a complimentary lunch Friday, October 30th CICO Park, Manhattan. Also, plan to attend your respective breed association's annual meeting.

Sincerely your,

Edward P. Call
Extension Specialist
Dairy Science

James R. Dunham
Extension Specialist
Dairy Science