



Volume 6, Number 5

Co-Editors

John F. Smith Extension Specialist, Dairy Science

Dan Waldner

Extension Specialist, Dairy Science

Mike Brouk

Extension Specialist, Dairy Science

Contributors

Karen Schmidt

Professor, Dairy Products

John Shirley

Professor, Dairy Science

Jeff Stevenson

Professor, Dairy Science

Dave Sukup

Manager, Heart of America DHI

Upcoming Events

See the March issue of Dairy Lines for more information Employee Management for Animal Agriculture Conference August 10–11 • Hyatt Regency Wichita, KS

> Dairy Field Days & Judging Clinics

June 8 • Brown Swiss & Jersey

June 9 • Guernsey

June 13 • Grady Co. Dairy Judging Clinic & Milking Shorthorn June 15 • Holstein

Events continued on page 2





Printing sponsored by



Food · Health · Hope™

DAIRY RESEARCH & EXTENSION NEWS

http://www.oznet.ksu.edu/dp_ansi/dairylin.htm

Optimum timing of artificial insemination

Glenn Selk, OSU Extension Animal Reproduction Specialist

Dairy producers need every edge that they can find to get high producing cows rebred and keep calving intervals from lengthening. The timing of insemination in relation to the start or ending of standing heat has been studied for more than 50 years. Most of the data indicated that the best conception rates occurred when cows were inseminated at mid estrus until a few hours after the end of standing heats. These guidelines led to the currently popular AM/PM rule of breeding 12 hours after the cow was first found to be in standing heat.

Recent research concerning the proper timing of insemination may aid in this battle to keep calving intervals reasonable. Researchers from VPI in Virginia and Cornell University in New York were attempting to better refine the optimum time of artificial insemination. They used the HeatWatch radiotelemetry estrus detection system in 17 herds to determine the precise time of each mount of more than 2,600 heats. Each farm selected a 3-hour period to AI cows that were identified in standing heat. Pregnancy was determined by rectal palpation 35 to 75 days after breeding. The results from this study would suggest that artificial insemination in Holstein cows would have the greatest success rate if the insemination was done 4 to 12 hours after the first indications of standing heat. This seems to be earlier than age-old wisdom has suggested. See Table 1 below.

Other research from Virginia studied the time from the onset of standing heat to actual ovulation or the release of the egg from the follicle. Although there was considerable variation among the cows studied, they concluded that the average number of hours from the onset of standing heat to ovulation was 27.6 hours. This time is considerably shorter than what is being found by Oklahoma State University beef researchers, who have concluded that ovulation in beef cows occurs much later (31.5 hours after first mount). This new knowledge about the differences in dairy and beef cows may be useful to both groups. The old AM/PM rule basically splits the difference between the two kinds of cattle and was a good generalization for all cattle. However, inseminating slightly earlier than 12 hours after first heat may have an advantage for the dairyman who has electronic heat detection or a very watchful eye.

Table 1. Effect of time from onset of standing heat to insemination on conception rate (adapted from Dransfield and coworkers, 1998 Journal of Dairy Science)

Ü	*	
Interval from onset of heat to AI	Number of AI attempts	Conception rate
0 to 4 hours	327	43.1%
4–8 hours	735	50.9%
8–12 hours	677	51.1%
12–16 hours	459	46.2%
16–20 hours	317	28.1%
20 –24 hours	139	31.7%
24–26 hours	7	14.3%

Heart of America Dairy			rtiles		
	1	2	3	4	You Her
Ayrshire					
Rolling Herd Average	16,908	14,292	12,963	11,519	
Summit Milk Yield 1st	61.0	34.6	47	27	
Summit Milk Yield 2nd	75.5	65.6	53	47.6	
Summit Milk Yield 3rd	79.5	45.3	61.5	38	
Summit Milk Yield Avg.	73.5	63.6	55.5	51.6	
Income/Feed Cost SCC Average	1,332 256	927 245	1,074	759 184	
Days to 1st Service	80.5	60.6	58.5	87.6	
Days Open	151.5	101	116	120	
Projected Calving Interval	14.2	12.5	13	13.1	
Brown Swiss					
Rolling Herd Average	19,531	15,824	14,742	12,000	
Summit Milk Yield 1st	59.2	53.8	49.4	45.5	
Summit Milk Yield 2nd	77.6	64.8	49	57.1	
Summit Milk Yield 3rd	86.2	72.8	68.2	60.5	
Summit Milk Yield Avg.	74.4	1 241	60.8	54.6	
Income/Feed Cost SCC Average	1,568 481	1,241 337	1,206 257	964 331	
Days to 1st Service	98	83	83.4	58	
Days Open	157	170	163	264	
Projected Calving Interval	14.3	14.8	14.6	17.9	
Guernsey					
Rolling Herd Average	16,437	15,293	13,810	11,628	
Summit Milk Yield 1st	58	60	49	46.5	
Summit Milk Yield 2nd	69	31.5	60	53.5	
Summit Milk Yield 3rd	68	36	59	54	
Summit Milk Yield Avg.	64	62.5	56	52	
Income/Feed Cost SCC Average	1,502 215	1,356 151	1,235 338	951 293	
Days to 1st Service	91	41.5	70	113	
Days Open	177	121	147	199	
Projected Calving Interval	15	13.1	14.1	15.7	
Holstein					
Rolling Herd Average	23,007	19,904	17,639	14,416	
Summit Milk Yield 1st	72.8	65.3	59.8	50.8	
Summit Milk Yield 2nd	93.3	83.9	73.8	62.4	
Summit Milk Yield 3rd	99.4	89.1	80.9	68.5	
Summit Milk Yield Avg.	87.7	79.2	72.3	62.4	
Income/Feed Cost SCC Average	1,841 333	1,520 368	1,303 372	1,024 490	
Days to 1st Service	92	91	90	92	
Days Open	162	167	176	197	
Projected Calving Interval	14.5	14.7	15	15.6	
ersey					
Rolling Herd Average	17,289	14,816	13,367	10,923	
Summit Milk Yield 1st	53.8	50.2	45.7	37.6	
Summit Milk Yield 2nd	48.2	50.6	55.1	48.7	
Summit Milk Yield 3rd	74	57.2	61	51.5	
Summit Milk Yield Avg.	65.6	57.6	54.8	46.8	
Income/Feed Cost SCC Average	1,702 353	1,503 320	1,211 200	781 450	
Days to 1st Service	75	77	78	78	
Days Open	140	133	141	135	
Projected Calving Interval	13.8	13.5	13.8	13.6	
Milking Shorthorn					
Rolling Herd Average	14,734	13,721	13,604	11,762	
Summit Milk Yield 1st	49	55	47	23	
Summit Milk Yield 2nd	70	70	54	50	
Summit Milk Yield 3rd	71	76	66	64.5	
Summit Milk Yield Avg.	60	70	58	57.5	
Income/Feed Cost	1,008	1,166	1,100	1,259	
SCC Average Days to 1st Service	222	180	327	290	
Days to 1st service	84		80	84	
Days Open	155	270	156	110	

	ices*—Kansas	Quality	Price (\$/ton)
	Locuion	Quanty	1 πε (φ/ισπ)
Alfalfa	Southwestern Kansas	Supreme	105–115
Alfalfa	Southwestern Kansas	Premium	65–105
Alfalfa	Southwestern Kansas	Good	_
Alfalfa	South Central Kansas	Supreme	_
Alfalfa	South Central Kansas	Premium	75–90
Alfalfa	South Central Kansas	Good	50–75
Alfalfa	Southeastern Kansas	Supreme	_
Alfalfa	Southeastern Kansas	Premium	80–90
Alfalfa	Southeastern Kansas	Good	60–75
Alfalfa	Northwestern Kansas	Supreme	_
Alfalfa	Northwestern Kansas	Premium	80–90
Alfalfa	Northwestern Kansas	Good	50-70
Alfalfa	North Central Kansas	Supreme	_
Alfalfa	North Central Kansas	Premium	75–100
Alfalfa	North Central Kansas	Good	50-70

Supreme = over 180 RFV (less than 27 ADF) Premium = 150–180 RFV (27–30 ADF) Good = 125–150 RFV (30–32 ADF)

Source: USDA Kansas Hay Market Report, May 9, 2000

Hay Prices—Oklahoma			
	Location	Quality	Price (\$/ton)
Alfalfa	Central/Western, OK	Premium	85-100
Alfalfa	Central/Western, OK	Good	60–85
Alfalfa	Panhandle, OK	Premium	85–95
Alfalfa	Panhandle, OK	Good	60–80

Source: Oklahoma Department of Agriculture, May 4, 2000

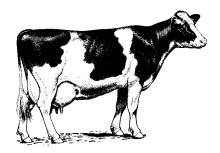
Feed Stuffs Prices			
	Location	Price (\$/ton)	
Blood Meal	Texas Panhandle	_	
Corn Gluten Feed	Kansas City	55-58	
Corn Gluten Meal	Kansas City	240–245	
Corn Hominy	Kansas City	68–73	
Cotton Seed Meal	Kansas City	139–141	
Whole Cotton Seed	Memphis	120	
Distillers Grains	Central Illinois	70-75	
Pork—Meat and Bone Meal	Texas Panhandle	_	
SBM 48%	Kansas City	179–185	
Wheat Middlings	Kansas City	44-48	

Source: USDA Feedstuff Market Review, May 3, 2000

Upcoming Events *con't.*

Sooner State
Judging Contest
and Quiz Bowl
July 28 • Payne Co. Fairgrounds, Stillwater, OK

Kansas Junior Dairy Show August 17–19 • Salina, KS



Employee Management for Animal Agriculture Conference August 10-11, 2000 Hyatt Regency-Wichita, Kansas

General Sessions

Business Success through People-Oriented Management

—Every day we are hearing that people are the most important asset of a business. This presentation will introduce the conference by providing a vision for a farm business that develop and utilizes ALL of the capabilities of ALL personnel.

Creating a Positive Culture—This session will help employers turn their businesses into places where people enjoy working. This incredibly thought-provoking topic could be the single most important session for employee retention.

Building a Reputation as an Employer—If you want to have strong applicants, take some time to improve your number one recruitment tool – your reputation. This session will help your business become known as one where people want to work.

Measuring and Improving Employee Satisfaction—How satisfied are your employees with their jobs? What influences an employee's job satisfaction? This session shows research results from interviews with 300 farm employees. What they have to say might surprise you.

Breakout Sessions

- Conflict Resolution—Employee managers are constantly struggling to "put out fires." This session will cover how those conflicts can be prevented and resolved.
- Employee Empowerment—This session will help you develop the kind of employees who can think for themselves, manage their own work and take initiative.
- Selecting for Success—Before you hire another employee you should develop a selection process that assures a good match between person and position. Participants will learn about selection tools that match their business objectives and culture.
- Creative Compensation—It is more important than ever to create competitive, flexible, and affordable compensation packages. This session will help you outline a pay system that sends all the right messages.
- Managing the Multicultural Workforce—This session covers tough topics, such as conquering language barriers, appreciating different cultures, and integrating traditional and multicultural employees.
- Building Teams as a Staffing Strategy—Many employers are turning to team-based work to allow more flexibility. See how you can create teams and improve your employee productivity and morale.

- Evaluating Performance and Providing Feedback—Research shows that providing timely and useful feedback is one of the most important things any manager can do. This session will help make sure you do it and do it right.
- 8. The first 30 days!—The first month of a new job is the most important time of an employee's tenure with a business. This session will focus on the steps every employer should take to make the first thirty days, and possibly the next thirty years, run as smoothly as possible.
- Overcoming Barriers to Communication—Communication is a key to success with any business. It is easy to assume messages are clear and easily received, but this session might make you re-think your current practices.
- Becoming the Employer's MVP—Every operation needs a Most Valued Person—the employee the ownership turns to in a crisis.
 This session details the rise of an employee into MVP status.
- Managing the Family Workforce—In this session you will learn how to manage conflicts and communicate through the problems that arise when you're working with friends and family.
- 12. Minimizing Legal Risks—Here we will tackle such questions as discrimination, liability and discipline do's and don'ts. This session will be a must for anyone concerned about the legal risk that employers assume.

This is the most comprehensive conference on human resource management ever in the Midwest. Nowhere else can you interact with experts of this caliber.

The conference will kick off at 10:00 a.m. Thursday, August 10, 2000 and adjourn by 3:30 p.m. on Friday, August 11, 2000.

Lodging

The Hyatt (800-360-8188) is offering a special rate for conference participants who call before July 10. After July 10, the conference rate will be available on a limited basis. Please call the hotel of your choice as soon as possible for reservations.

For More Information

Sarah Fogleman 316-431-1530 sfoglema@oznet.ksu.edu
John Smith 785-532-1203 jfsmith@oznet.ksu.edu
Lance Huck 316-275-9164 lhuck@oznet.ksu.edu
Mike Tokach 785-532-2032 mtokach@oznet.ksu.edu
www.oznet.ksu.edu/employee

Registration Form

No registrations will be accepted after August 3

Mail form and check to Southeast Area Extension Office, 308 West Fourteenth, Chanute, KS 66720

Make Checks payable to SEA Extension Office

No refunds given after August 3

Register early-Space is Limited!

Questions? Call Karen at 316-431-1530

Name			
Business name			
Address			
City	State Zip		
Phone	_ E-mail		
Breakout sessions most interested in attending:	#####		
Enterprise most involved in: Beef Swine	Dairy Other		
Check included for:Full Registration, \$100 (includes all meals, except breakfast, and materials)			
Late Registration (after July 21 and before August 3) \$125			
Guest Ticket for Riverwalk	Barbacua \$15		

COOPERATIVE EXTENSION SERVICE U.S. DEPARTMENT OF AGRICULTURE KANSAS STATE UNIVERSITY MANHATTAN, KANSAS 66506

Dairy Lines is jointly published for dairy producers by the Department of Animal Sciences and Industry, K-State Research and Extension, and the Department of Animal Science, Oklahoma Cooperative Extension Service. For more information or questions, please contact 785.532.5654 (K-State) or 405.744.6058 (OSU).

Kansas State University K-State Research & Extension Department of Animal Sciences and Industry Call Hall, Room 139 Kansas State University Manhattan, Kansas 66506 KSU, County Extension Councils and U.S. Department of Agriculture Cooperating.

All educational programs and materials available without discrimination on the basis of color, race, religion, national origin, sex, age, or disability.

The Department of Animal Sciences and Industry at Kansas State University greatly appreciates the sponsor(s) of the Dairy Lines Newsletter. These sponsorships in no way imply the Department's endorsement of the products and services offered by the sponsors. The Department welcomes inquiries from other individuals, associations and firms that may be interested in cosponsoring this publication.

John Smith **Extension Specialist** Dairy Science K-State

Mike Brouk **Extension Specialist Dairy Science** K-State

Dan Waldner **Extension Specialist Dairy Science** Oklahoma State



DAIRY RESEARCH AND EXTENSION NEWS K-State Research and Extension and Oklahoma State University