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

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, $300

KSU KANSAS STATE UNIVERSITY

KANSAS DAIRY EXTENSION NEWS

VOLUME 12 (6) NOVEMBER-DECEMBER 1991

Inside this issue.....

BASIC MILKERS SCHOOL

KANSAS STATE UNIVERSITY
JANUARY 7 AND 8

Please Pre-Register

WHAT EFFECT --- GENETICS

DHIA 202B

HERD SIRE EVALUATION						
	Without PTA	With PTA	Predicted Transmitting Abilities			
			Milk	Fat	Protoin	Protoin $$
Lact 1	1	22	+1339	+61	+41	+189
Lact 2		17	+1568	+59	+47	+208
Lact 3		9	+1457	+54	+43	+192
Lact 4+		12	+1090	+35	+28	+137
Producing Females	1	60	+1372	+54	+40	+184

A quick look at the semi-annual USDA active AI sire summaries indicates great differences among bulls' genetic ability to transmit milk production. Even greater differences exist between active AI sires and bulls used naturally.

Within a herd, it's more difficult to see or measure genetic differences. After all most dairy cows give some milk. It's only when compared with herdmates (difference from) do we see the widely divergent genetic ability of cows. In a recent study, Kansas Holstein herds were grouped by rolling herd average (RHA) and examined for sire selection patterns.

Table 1 illustrates that the genetic merit of sires of producing cows (MFP$) varies little with yearly milk per cow (RHA). However, note the percentage of cows whose sires are proved as RHA increases! A similar pattern is seen in Table 2 which evaluates the service sires' MFP$ in the various groups. Again, higher producing herds select sires of greater genetic merit and use such bulls more widely. Even though feeding and management has a definite bearing on yearly level of production, producing ability is limited by the genetic make-up of each cow. After all, beef cows just don't milk well when managed in a dairy operation.

Table 1. Genetic Merit of Sires of Producing Cows in Kansas Holstein Herds Grouped by Rolling Herd Average (RHA). 1991.

Rolling herd avg (milk)	No. of herds	Proved sires' avg MFP$	Cows w/ proved sires
(lb)		($)	(%)
12,707	54	+ 84	26
15,188	107	+ 84	46
17,022	172	+100	63
19,001	148	+107	72
21,061	70	+119	88

Milk & Dairy Beef **Quality** Assurance Program

QUALITY MILK ASSURANCE WORKSHOPS

A national program to assure consumers that milk and dairy beef are drug free will begin January 1, 1992. Producers and their veterinarians are asked to adopt a 10-point program to insure that milk and dairy beef products are not contaminated.

K-State Extension Dairy Specialists will conduct 31 workshops throughout Kansas in late January and February. Producers and their veterinarians will be asked to review the 10-point program at one of these meetings scheduled for one and one-half hours. Specific times and locations will be published in early January.

THE COVER

Panel participants at the 1991 K-State Dairy Day were (l to r): Jim Armbruster, Madison, WI; LaVerne Myers, Abilene; Steve Strickler, Iola; Dee James, Abilene. E.P. (Ed) Call, Manhattan, served as moderator.

Table 2. Genetic Merit of Service Sires Used in Kansas Holstein Herds Grouped by Rolling Herd Average (RHA). 1991.

Rolling herd avg (milk)	Avg sires' merit: All* (MFP$)	Avg sires' merit: Proved (MFP$)	Cows bred to proved sires
(lb)	($)	($)	(%)
12,707	+ 61	+178	34
15,188	+ 97	+195	50
17,022	+123	+197	62
19,001	+133	+196	68
21,061	+156	+203	78

*Assumes unproved bulls' MFP$ = 0.

MILK & DAIRY BEEF QUALITY ASSURANCE PROGRAM

Producers-Veterinarians Asked To Meet

January 1, 1992 is the target date for the Milk/Dairy Beef Quality Assurance Program (**Quality Assurance**). All dairy producers, nationwide, will be involved. The program was initiated through cooperative efforts of the National Milk Producers Federation (NMPF) and the American Veterinary Medical Association (AVMA).

The basis of **Quality Assurance** is to provide the consumer with drug-free milk and meat products. Starting January 1, 1992, each tanker load of milk will be screened for Beta Lactams. When a tanker is found to be positive, individual farm samples will be screened to determine the violating producer. July 1, 1992, the violating producer will be responsible for disposing of the contaminated tanker of milk and the farm's permit suspended for a minimum of two days.

A producer's permit may be reinstated under the following conditions:

1. Temporary status may be restored after a bulk tank sample is no longer positive for drug residue.

2. The permit will not be reinstated until the responsible producer and a licensed veterinarian have signed a quality assurance certificate certifying that a "milk and dairy beef residue prevention protocol" is in place and being implemented for the violating dairy herd.

Quality Assurance Producer/Vet Meetings

Thirty-one training sessions for producers and their veterinarians are scheduled in late January and February throughout Kansas. Details will be announced in the Kansas Dairy Extension News [KDEN 13(1)] January, 1992 issue.

THE 10-POINT PROGRAM

1. Practice Healthy Herd Management
2. Establish a Valid Veterinarian / Client / Patient Relationship
3. Use Only FDA - Approved Drugs
4. All Drugs will be Properly Labelled
5. Proper Drug Storage
6. Administer Drugs Properly and Identify All Treated Animals
7. Maintain Records on Treated Animals
8. Use Drug Residue Screening Tests
9. Implement Employee / Family Awareness of Proper Drug Use
10. Complete the Quality Assurance Checklist Annually

Milk & Dairy Beef
Quality
Assurance Program

22nd Annual

KSU
KANSAS STATE UNIVERSITY

BASIC MILKER'S SCHOOL
JANUARY 7 & 8, 1992

Applications due by: JANUARY 6, 1992
School will be limited to first 30 registrants

Tuesday, January 7

9:00 a.m. Call Hall - Rm 140	- Course Orientation and Introduction
9:30 a.m. Call Hall	- Anatomy of the Mammary System and Milk Letdown
10:30 a.m. Call Hall	- Milk Break
10:45 a.m. Call Hall	- Milking Procedures - Hygiene
11:30 a.m. Call Hall	- Mastitis -- Definition and Incidence; Causes; Detection; Screening
Noon (on your own)	- LUNCH
1:00 p.m. Dairy Center	- Group A - Milk Letdown -- Stimulation and Inhibition
	- Group B - Screening Tests for Milk Quality - SCC
2:00 p.m.	- Groups reverse
3:15 p.m. Call Hall	- Milk Break
3:30 p.m. Call Hall	- Introduction to Milking Equipment
6:00 p.m.	- Dinner

Wednesday, January 8

8:00 a.m. Call Hall - Rm 140	- Milking Systems Evaluation
9:00 a.m. Dairy Center	- Group A - System Evaluation
	- Group B - Milking Observation - Time Study
10:30 a.m.	- Groups reverse
Noon (on your own)	- LUNCH
1:00 p.m. Call Hall - Rm 140	- Review Milking Observation and Sanitation
2:00 p.m. Call Hall	- Mastitis Treatment and Control Programs
3:15 p.m. Call Hall	- Summary and Presentation of Certificates

==========

REGISTRATION
(Registration deadline - January 6, 1992)
(Note: KSU is closed from Dec. 21 thru Jan. 1)

Name _____

Address _____

Phone (___) _____ *Occupation* _____

Herd Size _____ *Employer* _____

Registration Fee -- $20.00 (includes supplies and evening meal, January 7)

Make checks payable to: ***KANSAS MASTITIS COUNCIL, INC.***

Return application to: ***J.R. Dunham***
Call Hall, Kansas State University
Manhattan, KS 66506-1600
(913)532-5654
FAX:(913)532-5681

AI vs NATURAL

And the winner is.... **AI.** Table 1 shows the superiority of the average Holstein AI proved bull compared with the average natural proved bull.

Table 1. Superiority of the Average Holstein AI Proved Bull Compared with Average Natural Proved Bull (First Evaluation). 1991.

	Predicted Transmitting Ability (PTA)			
	Milk (lb)	Fat (lb)	Protein (lb)	MFP$ ($)
AI Bulls	+1111	+42	+33	+145
Natural	+ 371	+15	+12	+ 50
AI Adv.	+ 740	+27	+21	+ 95

The $95 advantage of the AI bull (or 740 lb more milk per year) is the average increase in production of each AI daughter when bred to breed average cows. An added benefit of using AI is that daughters of AI bulls transmit at a higher genetic level and further enhance genetic gain each generation.

Then Why Use Natural?

Better conception rate? Fewer reproductive problems? No heat checking? And there may be other reasons. But does it pay in better production and increased profit?

The University of Georgia surveyed DHIA herds and compared those using mostly AI with herds using mostly Natural services. Table 2 presents the surprising results. While many factors enter into a herd's level of production, cows in herds using AI have superior genetics on average and convert feed into milk more efficiently. Contrary to popular opinion, little differences existed between reproductive parameters and mating system.

Even at $11.00 milk, the nearly $300 difference in income per cow in the AI herds more than justifies a total commitment to AI.

Table 2. Comparison of Georgia DHIA herds using natural service vs AI.

Program Type	No. of Herds	Average Days Dry	Average Days Open	Calving Interval (Days)	Milk Production (lbs)	Fat Production (lbs)
AI	122	70	146	420	16,832	587
Bulls	62	70	154	429	14,139	501
AI Adv.	184	0	-8	+9	+2,693	+86

GA. DAIRY FAX, DyS 91-010. 1991.

DAIRY DAY ATTRACTS 281

-12,875 cows represented-

"Communication" "Compliment" "Evaluation"...

These three words summed up the Keynote address by Jim Armbruster, University of Wisconsin-Madison at the 1991 K-State Dairy Day. Following through on the theme, Personnel Management on Dairies, a panel discussed various aspects of labor management. Moderated by K-State Extension Dairyman E.P. (Ed) Call, Dee James, Attorney, K-State Extension Ag. Economist, discussed legal obligations of employers. LaVerne Myers, dairy producer from Abilene spoke about developing family partnerships. Steve Strickler, Iola, enumerated various fringe benefits offered as incentives by his operation.

Twenty-nine exhibitors sponsored an excellent noon lunch. J.R. (Dick) Dunham, K-State Extension Dairyman, presented plaques to the following Kansas Quality Milk Award winners in the large and small herd divisions:

Large Herd:
1. Frank & Doug Anderson, White City
2. Penning Jerseys, Atchison
3. Hartter Brothers, Bern

Small Herd:
1. Lavern Figge, Onaga
2. Charles & Anita McKee, Wetmore
3. Don Kiehl, Pomona

Certificates of Merit were presented to a record 207 Kansas dairy producers.

WATCH RATION PROTEIN

Early fresh cows need balanced rations with 18% crude protein to maximize peak production. While expensive, it is more costly to depress peak milk flow with protein deficient rations. In herds without split production lots, a magnetic or computer feeder may be the best way to deliver extra protein. After early lactation (3-4 mo), the protein content of the total ration may be reduced to a more economical 16% of the dry matter intake.

What's Happening

December 17	Repro-Clinic, Mankato
December 19	Repro-Clinic, Westmoreland
December 20	Repro-Records Clinic, Hiawatha
January 3	Repro-Clinic, Gardiner
January 7-8	Basic Milker's School, Manhattan
January 10	Repro-Clinic, Newton
January 14	Heifer-Rearing, Hillsboro
January 15	Heifer-Rearing, Hutchinson

NOTE: July 1, 1993. Legal limit for SCC will be not more than 750,000.

What's in Print

K-State Dairy Day Report	ROP 640
Raising Dairy Heifers	C-721
Managed Milking (Spanish)	DyS 91-1
KSU Dairy Computer Programs	DyS 91-4

CLIP UDDERS. Clipping the hair from the udder lowers the incidence of new cases of mastitis by an estimated 50 percent. Producers are urged to clip udders on all fresh cows before entering the milking string.

Professional Fieldman (Klenzade). 1991.

MICRO TRIVIA. Microbes have the capacity of multiplying at an incredible rate. For example, one cell of E. coli could, under perfect conditions, produce a mass of bacteria greater than the mass of the earth in three days!

Udder Topics. Nat'l. Mastitis Council. 1991

KSU
KANSAS STATE UNIVERSITY

Cooperative Extension Service
Extension Animal Sciences and Industry
Call Hall
Manhattan, Kansas 66506-1600
913-532-5654
FAX: 913-532-5681

Dear Dairy Producer:

January 7-8 are the dates of the **22nd Annual Basic Milkers School** at K-State. Please pre-register. Milk and Dairy Beef Quality Assurance Program workshops will be held at 31 locations in late January and February, 1992.

Sincerely,

Edward P. Call
Extension Specialist
Dairy Science

James R. Dunham
Extension Specialist
Dairy Science

KSU, County Extension Councils and U.S. Department of Agriculture Cooperating
All educational programs and materials available without discrimination on the basis of race, color, national origin, sex, age, or handicap.