January 1999

Dairy Lines

Volume 5, Number 1

DAIRY RESEARCH & EXTENSION NEWS

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

Co-Editors

John F. Smith
Extension Specialist, Dairy Science

Dan Waldner
Extension Specialist, Dairy Science

Mike Brouk
Extension Specialist, Dairy Science

Contributors

Karen Schmidt
Associate Professor, Dairy Products

John Shirley
Associate Professor, Dairy Science

Jeff Stevenson
Professor, Dairy Science

Dave Sukup
Manager, Heart of America DHI

Upcoming Events

February 8—10 am–2 pm
Oklahoma District
DHIA Meeting
Mayes County Extension Office
Pryor, OK

February 9—10 am–2 pm
Oklahoma District
DHIA Meeting
Grady County Extension Office
Chickasha, OK

March 26–28
Spring Fair Junior Dairy Show
Oklahoma City, OK

Contact Dan Waldner at 405-744-6058 for more information on the previous events.

Kansas State University
Research and Extension

OSU
OKLAHOMA COOPERATIVE EXTENSION SERVICE

Introducing a new member to K-State's animal sciences program...

Dr. Mike Brouk has joined the faculty of Kansas State University as an Extension Dairy Specialist. Dr. Brouk, a dairy nutritionist, fills the vacancy created by Dr. Dick Dunham's retirement. He is a Missouri native and holds degrees from the University of Missouri and South Dakota State University. His professional experience includes both academic and feed industry activities. He was most recently employed by the Commercial Agriculture Program of the University of Missouri. Mike's research interests include heifer and cow nutrition as well as cattle management. He and his wife, Michelle, are the parents of three daughters and one son.

Welcome aboard Dr. Brouk!

Low-Cost Way To Pave Feedlots

By Jan Suszkiw, Agricultural Research Service

"Flyash" could become the latest buzzword around the barnyard.

Thanks in part to studies by Agricultural Research Service (ARS) and industry scientists, this powdery byproduct of burning coal to generate electricity is now helping dairy farmers mud-proof their barnyard feedlots. That is where heavy winter or spring rains quickly turn soils to knee-deep mud, bogging down hefty cows, subjecting them to disease, and sapping them of energy to produce milk.

But research has shown that by paving feedlot areas with a hydrated form of flyash, farmers can build a solid foundation to give their cows a leg up on mud. Not only is flyash cheaper than paving with concrete—$6 per square yard versus $75—it poses little danger to the environment.

That is the verdict from pilot studies conducted by ARS soil scientist William L. Stout in cooperation with professional geologist Thomas L. Nickeson of Wellsboro, Pennsylvania, and two commercial partners—Gerry Thompson of Air Products and Chemicals (AP&C), an Allentown, Pennsylvania, company; and Paul Cunningham of Black Rivers Co-Gen Partners, a Fort Drum, New York, power plant.

One study, conducted in 1995–96 on an experimental dairy farm north of Harrisburg, Pennsylvania—and funded by the U.S. Department of Energy—examined the environmental impact of spreading 33 tons of flyash onto a 900-square foot feedlot. Researchers applied a form of flyash gleaned from a coal-burning process called fluidized-bed combustion that is employed by the electric utility industry.

Using instruments called suction lysimeters, the team monitored the concentrations of various elements and heavy metals seeping into groundwater from the flyash pads. Later, they compared the data with that collected from an unpaved feedlot, says Stout, who is at ARS' Pasture Systems and Watershed Management Research Laboratory in University Park, Pennsylvania.

Though lab analysis revealed minute traces of elements like calcium and nickel, a heavy metal, "we weren't able to detect anything at unacceptable levels,," says Stout, referring to threshold levels for safe drinking water set by the U.S. Environmental Protection Agency.

Based on results from the Harrisburg study and other earlier ARS projects, the New York Department of Environmental Conservation subsequently approved farmer use of flyash as a safe barnyard paving resource. Follow-up studies conducted by Nickeson and collaborators at AP&C and three other companies also expedited approval in parts of El Niño-soaked California.

continued on page 2

Heart of America Dairy Herd Improvement Summary (December)

	Quartiles				Your Herd
	1	2	3	4	
Ayrshire					
Rolling Herd Average	15,230	14,644	13,405	10,268.5	
Summit Milk Yield 1st	53.0	53.0	23.5	38	
Summit Milk Yield 2nd	64.0	59.5	25.5	46.0	
Summit Milk Yield 3rd	64.0	68.0	65.0	53.5	
Summit Milk Yield Avg.	61.0	61.5	62.0	47.5	
Income/Feed Cost	1,481	1,058	990	630	
SCC Average	274	250.5	287	259	
Days to 1st Service	56	101.5	80	108	
Days Open	135	131.5	174.5	205	
Projected Calving Interval	13.7	13.55	14.95	15.95	
Brown Swiss					
Rolling Herd Average	18,472	15,475	14,422	13,522	
Summit Milk Yield 1st	56.0	47.33	47.2	47.67	
Summit Milk Yield 2nd	57.2	65.83	61.0	56.67	
Summit Milk Yield 3rd	76.8	65.83	67.8	63.83	
Summit Milk Yield Avg.	69.0	60.17	59.6	56.0	
Income/Feed Cost	1,643	1,339	1,335	1,182	
SCC Average	289	297.83	218.2	333.67	
Days to 1st Service	87.2	66.33	87.2	73.5	
Days Open	156.6	144.33	146.4	168.17	
Projected Calving Interval	14.36	13.98	14.02	14.73	
Holstein					
Rolling Herd Average	22,386	19,575	17,543	14,443	
Summit Milk Yield 1st	70.78	63.58	58.32	49.37	
Summit Milk Yield 2nd	90.33	80.06	72.25	60.26	
Summit Milk Yield 3rd	95.26	84.01	76.97	66.26	
Summit Milk Yield Avg.	84.2	75.44	69.52	59.77	
Income/Feed Cost	1,970	1,685	1,460	1,158	
SCC Average	329.74	382.2	408.85	495.66	
Days to 1st Service	88.95	90.07	90.88	81.88	
Days Open	158.53	165.93	170.46	187.03	
Projected Calving Interval	14.43	14.67	14.82	15.36	
Jersey					
Rolling Herd Average	16,324.38	13,963.78	12,673.38	10,462	
Summit Milk Yield 1st	50.38	44.89	44.13	36.89	
Summit Milk Yield 2nd	65.88	55.67	51.75	37.56	
Summit Milk Yield 3rd	68.63	54.44	56.38	46.78	
Summit Milk Yield Avg.	62.38	54.33	51.75	42.56	
Income/Feed Cost	1,648	1,503	1,342	862	
SCC Average	315.25	295.33	289.13	443.67	
Days to 1st Service	87.38	72.89	79.38	51.44	
Days Open	126.38	123.89	140.25	145.22	
Projected Calving Interval	13.35	13.28	13.84	13.98	
Milking Shorthorn					
Rolling Herd Average	14,172	14,049	13,909	11,035	
Summit Milk Yield 1st	46.0	51.0	46.0	39.0	
Summit Milk Yield 2nd	51.0	60.0	55.0	42.5	
Summit Milk Yield 3rd	75.0	68.0	70.0	53.5	
Summit Milk Yield Avg.	61.0	60.0	60.0	45.0	
Income/Feed Cost	1,226	1,470	1,585	870	
SCC Average	153	399	297	275.5	
Days to 1st Service	0	87	99	65.5	
Days Open	109	134	122	114.5	
Projected Calving Interval	12.8	13.6	13.2	13.0	

Summit milk has replaced peak milk in the above tables. Summit milk is the average of the two highest of the first three test days production. Summit milk values are generally lower than peak milk, but give a better estimation of nutrition and management of early lactation cows. Peak milk is the highest test during the lactation and may have no connection with early lactation nutrition and management. Increasing summit milk 1 pound usually results in increasing rolling herd average 250–300 pounds.

Hay Prices*—Kansas

	Location	Quality	Price ($/ton)
Alfalfa	Southwestern Kansas	Supreme	100–105
Alfalfa	Southwestern Kansas	Premium	85–100
Alfalfa	South Central Kansas	Supreme	100
Alfalfa	South Central Kansas	Premium	80–95
Alfalfa	Southeastern Kansas	Supreme	105
Alfalfa	Southeastern Kansas	Premium	85–100
Alfalfa	Northwestern Kansas	Supreme	100
Alfalfa	Northwestern Kansas	Premium	85–100
Alfalfa	North Central Kansas	Supreme	95–105
Alfalfa	North Central Kansas	Premium	85–95

Source: USDA Weekly Hay Report, *Week ending January 15, 1999*

*Premium Hay RFV = 170–200
Good Hay RFV = 150–170

Hay Prices—Oklahoma

	Location	Quality	Price ($/ton)
Alfalfa	Central/Western, OK	Premium	100–120
Alfalfa	Central/Western, OK	Good	85–100
Alfalfa	Panhandle, OK	Premium	95–110
Alfalfa	Panhandle, OK	Good	85–95

Source: Oklahoma Department of Agriculture, *January 3, 1999*

Feed Stuffs Prices

	Location	Price ($/ton)
SBM 48%	Kansas City	143.50–148.50
Cotton Seed Meal	Kansas City	135–141.50
Whole Cottonseed	Memphis	165
Blood Meal	Central United States	270–295
Corn Hominy	Kansas City	76–78
Corn Gluten Feed	Kansas City	85–88
Corn Gluten Meal 60%	Kansas City	305–310
Distillers Dried Grain	Central Illinois	90–98
Brewers Dried Grain	St. Louis	NA
Wheat Middlings	Kansas City	76–80

Source: USDA Weekly Feed Stuffs Report, *Week ending January 13, 1999*

Paving Feedlots from page 1

Mike Huggins, of the San Joaquin County Environmental Heath Division, said five dairy operations in his jurisdiction have paved their lots with a local plant's flyash to protect their cattle from high water and muddy conditions that promote disease.

For Nickeson, using flyash to pave feedlots is a win–win situation for both the electric utility industry and dairy producers. By selling the flyash, power plants save money on waste disposal; by using it, farmers safeguard their cattle's welfare and ensure peak milk production and growth during the rainy season.

Paving also helps direct manure towards waste utilization systems, says Stout. That helps reduce the potential for nitrogen and phosphorus to contaminate groundwater.

1999 Western Dairy Management Conference

Alexis Park Resort • Las Vegas, Nevada

http://www.wdmc.org

REGISTRATION—April 7, 3:00 p.m.–10:00 p.m.;
April 8–9, 7:00 a.m.–5:00 p.m.; April 10, 7:00 a.m.–noon

SEMINAR TOPICS—April 8–10 (Seminars will be presented twice during the conference to accommodate everyone's schedule.)

Herd Health *(presented Thursday and Friday)*

- Taking on Johne's Disease—Why? and How?, Frank Garry, Colorado State University
- Managing Hoof Health, Steven Berry, University of California–Davis
- Co-Mingling—A Herd Time Bomb?, David Tomsche, Melrose Vet Associates

Economics of Dairying *(presented twice on Thursday)*

- Appropriate Debt Structure, Frank Fountain, Bank of America
- Managing Risk During Volatile Times on the Dairy, Linnea Kooistra, Kooistra Farms
- Decision-making Using Benchmarks, Terry Smith, Dairy Strategies, LLC

Our Industry Today *(presented Thursday and Friday)*

- Break Through Management for Your Dairy, Jim Cullor, University of California
- Panel—Maintaining Dairy Image; Food Safety, Animal Health, and Manure, Gary deGraf, Dairy farmer; Chuck Ahlem, Ahlem Jersey Dairy
- The Economics of On-farm Milk Concentration, Richard Fleming, USDA

Facilities and Feeding *(presented Thursday and Friday)*

- Benefits and Costs of Freestall Housing, Sandy Stokes, Texas A&M
- Relocation and Expansion Planning, John Smith, Kansas State University
- Heat Stress Management in Freestall Barns, Dennis Armstrong, University of Arizona
- Transition Cow Management, Jesse Goff, USDA, NADC
- New Tools to Manage the Nutrition Program, Greg Bethard, Monsanto Dairy Business
- Buying Forages Based on Quality, Rocky Langley, Price's Roswell Farm
- Heifer Feeding for Optimum Growth Rate, Pat Hoffman, Marshfield Research Station

Personnel *(presented Friday and Saturday)*

- Building Your Reputation as an Employer, Bernie Erven, Ohio State University
- Panel—Communications, Cultural Differences, Gregory Billikopf, University of California–Davis
- Managing and Motivating for Peak Performance, Dave Sumrall, Aurora Dairy Group
- Making Families Part of the Operation, Greg Ledbetter, C Bar M Dairy

Reproduction and Breeding *(presented Friday and Saturday)*

- Improving Pregnancy Rates in High Producing Cows, Jerry Olson, Pharmacia & Upjohn
- Programmed AI Breeding and its Costs, Jeff Stevenson, Kansas State University
- Sexed Semen and New Approaches to AI, George Seidel, ARBL, Colorado State University
- Inbreeding, Bennett Cassell, Virginia Polytechnic University

Hotel Information

Call 800-582-2228 for room reservations—ask for Western Dairy Management Conference Block. Make reservations by March 1, 1999.

Registration Form

4th Western Dairy Management Conference
April 7–10, 1999 • Las Vegas, Nevada

Name _____ Title _____

Farm/business name _____

Address _____

City _____ State _____ Zip _____

Telephone number _____

Number of cows milked _____

Check the following categories; total for payment

Registration fee—$175/person by 3/1/99 ..... _____
(includes two lunches and one proceeding)
After 3/1/99—$195/person

Extra copies of proceedings—$20 each ..... _____

Conference Shirts—indicate quantity and size (must be ordered prior to conference); Longsleeve sizes—XXL, XL, L, M, S, XS (generous cut); Shortsleeve sizes—M, L, XL, XXL

Longsleeve Denim Logo Shirt—$39 ..... _____
Shortsleeve Polo Logo Shirt—$32 ..... _____

Spanish Translation—$50/person ..... _____

Total ..... _____

Make checks payable to:
Western Dairy Management Conference

Credit Card # _____

Exp. Date _____

Signature _____

Mail to:
Dr. John Smith
Dept. of Animal Sciences & Industry
126 Call Hall
Kansas State University
Manhattan, Kansas 66506–1600
Phone: 785-532-2370
FAX: 785-532-2333

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

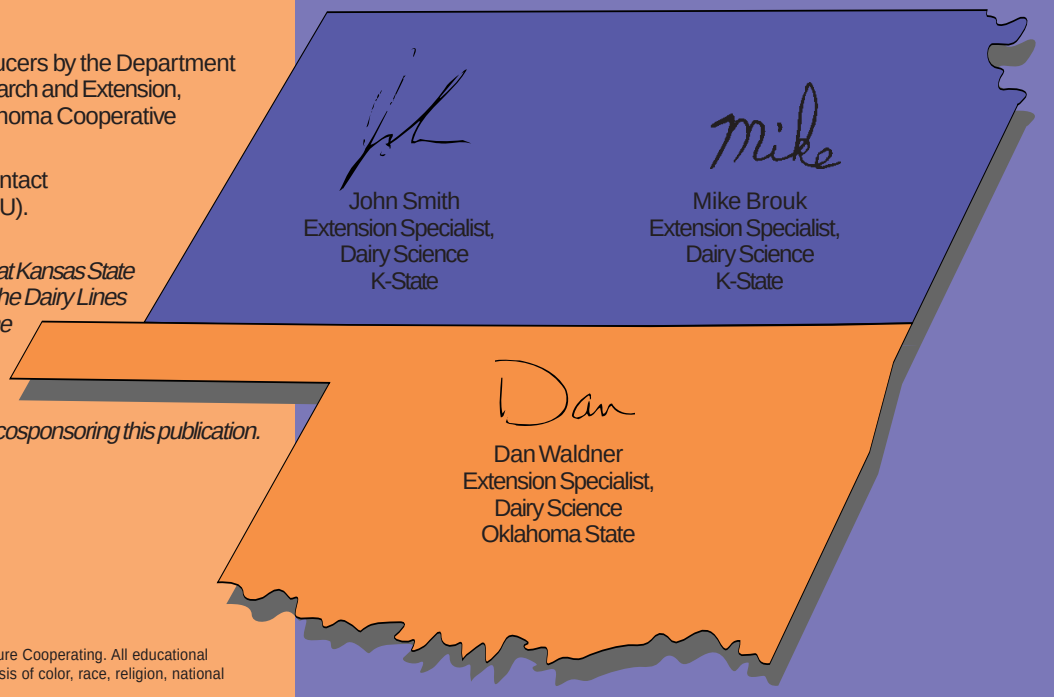
OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE. $300

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 913.532.5654 (K-State) or 405.744.6058 (OSU).

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.

Kansas State University
Cooperative Extension Service
Department of Animal Sciences and Industry
Call Hall, Room 139
Kansas State University
Manhattan, Kansas 66506



Dairy Lines

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