

Western Dairy News

For the West, About the West, From the West

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Western Dairy News Is a Presentation of



Welcome!

This is the introductory issue of the Western Dairy News, a combined effort of cooperating Extension dairy specialists in participating Western states. We plan to provide practical, pertinent and original information about issues and events critical to the dairy industry in the west. The emphasis on issues important throughout these states will provide a valuable perspective on our industry.

Western Dairy News will be published bimonthly. Your first issue should be mailed to you in June. If you are located in a participating state and have not received an issue by June 30th, please call your state dairy extension specialist. Let us know how we are doing. We appreciate your input.

Sincerely,

The WDN Steering Committee:

WR Wailes Jr.
WR Wailes (Colorado),

Rick J. Norrell
Rick Norrell (Idaho),

John Smith
John Smith (Kansas),

Mike Looper
Mike Looper (New Mexico),

Ellen B. Jordan
Ellen Jordan (Texas), and

Allen Young
Allen Young (Utah)

**Keep
Foot-and-Mouth
Disease
OUT
of America**

Remember to declare any visits to farms or contact with livestock
Remember to declare all food and agricultural items in your possession on your Customs form.
Failure to do so could result in a fine of up to \$1,000.



Foot and Mouth Disease Precautions for Dairies

John Kirk, DVM, MPVM
Dairy Extension Specialist,
University Of California
Tulare, CA 93265

The livestock industry in the United Kingdom (England) is currently being ravaged by an outbreak of Foot and Mouth Disease (FMD). As of March 22, 2001 the disease has also been identified in France, Belgium, The Netherlands, Ireland, Argentina and Colombia.

FMD is an extremely contagious viral disease that spreads easily among cloven-footed animals such as cattle, sheep pigs, goats, and deer. Infected animals shed large volumes of virus. Transmission of the virus may occur directly by inhalation or contact between infected and susceptible animals. Indirectly, the virus may be spread by contaminated animal products (meat, milk, semen) and objects (clothing, shoes, tires, feed). Symptoms of FMD include blisters around the mouth or on the feet, reduced appetite and lameness. FMD is not considered a human health risk but humans can carry the virus on their body (particularly the throat and nasal passages for up to 5 days) and personal items (clothing, shoes, cell phones).

(Continue on page 4, under Foot and Mouth Disease)

Notes from Texas :

Environmental Regulations by Ellen Jordan, Texas Dairy Specialist.

Texas dairy producers have faced some of the most stringent environmental regulations in the nation. Recently, an innovative method of nutrient management was initiated: A \$5.1 million dollar program to compost dairy manure and market the product outside the watershed. The program is designed to help meet regional water quality goals. The program involves transport of raw manure from dairies to existing compost sites, followed by compost marketing to consumers such as the Texas Department of Transportation (TxDOT). In recent years, TxDOT and Texas Natural Resource Conservation Commission (TNRCC) have been evaluating compost use to establish roadside vegetation.

Producers' environmental efforts are being challenged again even as they implement this new approach to waste management. All states are being required to identify waters that do not meet water quality standards. Each state must develop a total maximum daily load (TMDL) for each pollutant.

The North Bosque River runs through Erath County, the number one dairy county in Texas. Phosphorus (P) has been identified qualitatively by TNRCC as a pollutant in that watershed and they have created TMDLs. A stakeholder group, Bosque River Advisory Committee (BRAC), formed in 1996, failed to reach consensus on how to reduce P in the watershed. TNRCC established TMDLs for the North Bosque River, adopted them on February 9, 2001, but have not yet published a strategy to meet those TMDLs.

The goal set was to reduce the average total annual loading of soluble reactive P by 50% but no specific management options were defined. The future growth model incorporated full discharge from wastewater treatment plants, the maximum number of dairy cows allowable under current permits and an increase in wastewater discharge to represent new industrial or urban growth. No allowance for newly permitted or expanding dairies was included in the future growth model. During the comment period several city officials have requested that issuance of dairy permits, which might increase the number of dairy cattle in the watershed, be discontinued. Neither the cities involved nor producers are satisfied with the TMDLs and both have filed lawsuits against TNRCC.

EPA is requiring all states to develop lists of lakes rivers, streams and estuaries that may be impaired by some pollutant. TMDLs must be developed, followed by appropriate action plans. Texas dairy producers actively participated in trying to develop solu-
(Continue on next column, under Notes from Texas)

Notes from Idaho:

Nutrient Management Plans by Rick Norrell, Idaho Dairy Specialist.

Idaho dairy producers are facing a very important deadline this summer. All dairy operations are required to have a nutrient management plan (NMP) submitted to the State Department of Agriculture by July 1, 2001. A NMP is a document prepared by a certified Nutrient Management Planner in cooperation with the dairy producer. The primary goals for the nutrient management plans are: 1) ensure efficient utilization of nutrients in dairy waste, 2) minimize phosphorus runoff from cropland, and 3) prevent nitrate leaching into ground water. Plans are location specific and are written to reach crop production goals while minimizing impact of nutrients (nitrogen and phosphorus) to the environment. NMP's take into account herd size, facility design, waste management practices, number of crop acres, irrigation management, soils, climate, and crop production. If the producer does not have enough acres to utilize nutrients from the dairy, then exportation of dairy manure or purchase of additional crop acreage is considered. The Idaho Department of Agriculture will monitor the effectiveness of individual farm NMP's by collecting regulatory soil samples every three years.

Extension faculty from the University of Idaho have developed worksheets to assist producers in summarizing the required information for their farm. Information from these worksheets can be used by private certified planners, government agency personal or University faculty to develop a personalized farm NMP. The Idaho Department of Agriculture, Natural Resource Conservation Service, and University of Idaho are cooperatively developing a software program (Idaho OnePlan) for writing nutrient management plans. The beta version will likely be released in early April. Certified planners will receive training on how to use the OnePlan in late April. Time is getting very short for completion of plans. Producers, who have not already completed plans, are encouraged to fill out the worksheets and start the nutrient management planning process as soon possible.

(Notes from Texas, continued from previous column)

tions. At the current time, dairy producers and urban interests are both displeased with the outcome. Hopefully through continued negotiations during development of the action plan, a compromise can be reached that will allow the industry to prosper, while protecting the environment. Producers in other states will face these same issues soon if not already.

Articles in "Notes from....." are written by dairy specialists in participating states. These articles focus on topics of local concern with regional implications.

Potential Health Risks of Drinking Raw Milk

**Doreene Hyatt, Head, Bacteriology Section
Colorado State University Diagnostic Laboratory
Fort Collins, CO**

There is nothing quite like the taste of raw milk. Unfortunately, there are serious health risks associated with the consumption of raw milk. The Centers for Disease Control (CDC) reported 46 raw milk-associated foodborne disease outbreaks between 1973 and 1992. (See table one, page 4) In 38 of these outbreaks (86%), the implicated raw milk was produced at a commercial dairy. Nearly all of the 46 outbreaks occurred in states where it was legal to sell raw milk.

Disease outbreaks associated with raw milk can be due to improperly pasteurized milk. This was the case for thousands of midwesterners who became sick with salmonella in 1987. The same year 62 Californians died from listerial bacteria in cheese made from unpasteurized milk. Children unaccustomed to drinking raw milk may become ill. In 1998 an outbreak of *Salmonella typhimurium* occurred in young children who drank raw milk while visiting a western Massachusetts dairy farm.

In Canada disease outbreaks linked to drinking raw milk include: Five members of a Chilliwack family ill with Salmonella from raw goat's milk. Nine out of 13 kindergarten children ill with Campylobacter after drinking raw milk during a school visit to a local farm in Central Vancouver Island. In Vernon, cases of Campylobacter were traced to the consumption of raw milk. In the Kootenays, a 35 year old woman contracted a severe Brucella infection after consuming raw milk from several sources. In Ladysmith, a family that consumed raw milk for years had a 4 year old girl with neck abscesses due to Yersinia infection and an older brother with similar neck and lip abscesses. On the Queen Charlotte Islands, 2 people developed Toxoplasmosis after consuming raw goat's milk.

The FDA considers raw milk a public health problem and the CDC has labeled raw milk "unsafe". Some states still legally sell raw milk and raw milk products but that does not mean they are safe. Many states have banned the sale of raw milk.

Milk is generally free of bacteria when it is in the mammary glands and would remain that way if it weren't contaminated during collection. The bacteria in raw milk comes from inside the milk ducts in the teats, body surfaces of the animal, feed, water, air, and all of the different utensils and equipment used during the milking process. In today's modern milking systems the main sources of bacterial contamination include dirty udders, inadequate sanitizing of teat clusters, teat clusters that are dropped before use, and inadequately cleaned equipment. Both raw and pasteurized milk contain bacteria which can grow if the milk is not refrigerated.

Milk is a wonderful nutritional source for both people and bacteria. In fact, bacteria grow well in milk because it contains lactose, amino acids, vitamins and salts. The numbers of and types of bacteria present in the milk depends on many factors, including the type of animal feed (milk from silage-fed animals can contain large

(Continue on page 4, under Raw Milk)

**MARK YOUR
CALENDAR**

Calendar of Events

TEXAS

April 25-26, 2001: Mid-South Ruminant Conference. Hilton Arlington, Dallas/Fort Worth International Airport. Contact Ellen Jordan (972) 952-9210.

UTAH

May 15-19, 2001: Richmond Black and White Show. Richmond, Utah.

NEW MEXICO

June 22-23, 2001: Dairy Producers of New Mexico Annual Meeting/Trade Show. Rudos, New Mexico. Contact 1-800-217-COWS.

NATIONAL/INTERNATIONAL

July 24-28, 2001: ADSA/ASAS/PSA/AMSA Joint Annual Meeting. Indianapolis, Indiana. Information on the Internet at www.fass.org

Western Dairy News is published bimonthly as a service to the people interested in the health and welfare of the western dairy industry.

*For further information, contact
Dr. Ragan Adams, Editor, ILM,
CSU-VTH
300 West Drake Road
Fort Collins, CO 80523
(970) 491-0371
radams@vth.colostate.edu*

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Cooperative Extension programs are available to all without discrimination.

(Foot and Mouth Disease, continue from page 1)

Dairymen and other livestock owners should limit access to their properties by foreign tour groups and visitors that have recently been in any countries where FMD is active or suspected. Humans in close contact with infected animals may carry the virus in their respiratory tract for 5 days or more.

Introduction of FMD into the United States would be disastrous to the American livestock industry and wildlife community

The Animal and Plant Health Inspection Service (APHIS) recommends the following preventive measures be taken by travelers to the United States from FMD infected countries:

1. Avoid farms, salebarns, stockyards, packing houses, zoos, or other animal facilities for 5 days prior to travel.
2. Before travel to the United States, launder or dry clean all clothing and outerwear. All dirt and soil should be removed from shoes by thoroughly cleaning prior to wiping with cloth dampened with a bleach solution (5 teaspoons of household bleach in 1 gallon of water). Luggage and personal items (including watches, cameras, laptops, CD players and cell phones), if soiled, should also be wiped with a cloth dampened with a bleach solution.
3. Avoid contact with livestock or wildlife for 5 days after arrival in the United States.
4. Extra precautions should be taken by people traveling from farms in infected locales to visit or work on farms in the United States. Do not permit clothing, shoes or other articles that have been in FMD-affected countries to enter livestock areas. Keep protective clothing and footwear available. Require visitors to use them and to wash their hand prior to entering livestock facilities. Discourage close contact or handling of animals by foreign visitors.

The APHIS Emergency Operations Center (EMOC) has been activated to assist the public and industry members with their concerns dealing with FMD. The toll free number is 1-800-601-9327. International callers can reach the center by dialing 01-301-734-9257. APHIS' revised FMD factsheet, past EMOC notices, the traveller's information sheet and the question and answer sheet on FMD may be found at: <<http://www.aphis.usda.gov>>

If you would like to observe the manner in which this virus has spread through the UK, visit the following website: <www.guardian.co.uk/footandmouth/flash/0,7365,443772,00.html>

(Raw Milk, continue from page 3)

numbers of clostridium), where the animals are housed, and how the milk is collected. Normally, raw milk from a healthy animal collected under conditions of good hygiene contains about 1,000 bacteria per milliliter, which means that there are about one million bacteria per liter of raw milk. When the animals have mastitis or when hygiene is inadequate, there will be many more bacteria in the milk.

The most obvious intervention for contamination of milk is good hygiene. Proper sanitation and cleaning of both the animal's udder/teats and the milking equipment is necessary to reduce bacterial contamination. Another major intervention is proper storage of the milk. The milk must be stored at or below 7°C in order to reduce spoilage by bacteria. Some spoilage bacteria can still grow at refrigeration temperatures (psychotrophic bacteria), causing flavor and odor problems if there are high bacterial numbers and temperature is not low enough. Most of these bacteria cause milk spoilage, but aren't a great risk to human health. Exceptions are *Listeria monocytogenes* or *Yersinia enterocolitica* that cause severe human illness and even lead to death.

In the United States when the milk leaves the production plant, it is graded by bacterial counts. Certified raw milk cannot contain more than 10,000 organisms/ml. and more than 10 coliforms/ml. Raw milk that is to be sold for drinking must not contain more than 30,000 organisms/ml. Grade A raw milk cannot contain more than 100,000 organisms/ml. and also cannot contain more than 10 coliforms/ml. Only Grade A raw milk containing no more than 30,000 organisms/ml is suitable for drinking without pasteurization.

Pennsylvania State University has developed a checklist to inform dairymen the possible causes of high bacteria counts. This checklist can be found at their website:

http://www.penpages.psu.edu/penpages_reference/28902/28902114.HTML

**Table One:
Cause of Raw Milk-Associated
Foodborne Disease Outbreaks Reported
to CDC, 1973-1992**

<i>Pathogen</i>	<i># Of Outbreaks</i>	<i># Of Cases</i>
Camphylobacter	26 (57%)	1100
Salmonella	12 (26%)	331
Staphylococci	1 (2%)	15
Ecoli 0157:H7	1 (2%)	6
Unknown	6 (13%)	281
Total	46 (100%)	1733