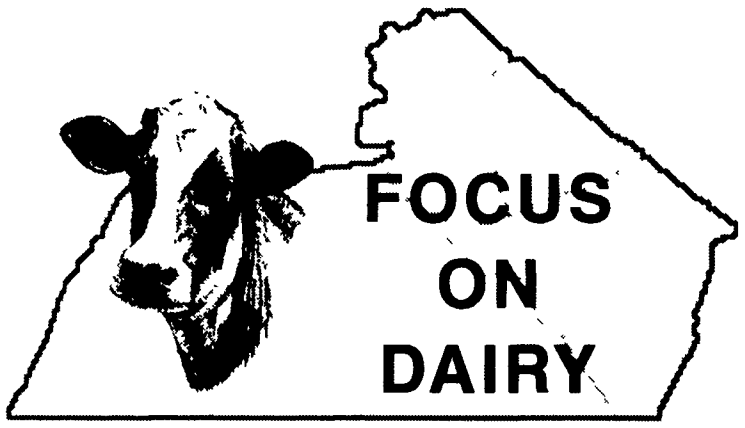

Penn State Cooperative Extension Capitol Region Dairy Team

PINKEYE SEASON HAS ARRIVED
Dr. Arlen Mills
Capitol Region Extension Veterinarian

Summer is here. With the warmer weather, it's time to plan ahead for some of the problems that are a part of summer.

One of those problems can be what is commonly called "pinkeye." Historically, pinkeye was considered to be an infection with a specific bacterium called Moraxella bovis. This attitude has resulted in numerous treatment and prevention failures.

This is because there are many contributing factors in the environment as well and several different types of infectious agents, including viruses, bacteria, and mycoplasma that may be involved in pinkeye problems.

The first sign of pinkeye is tearing. Affected eyes are light sensitive so the eye may be held shut. As the disease progresses, the cornea (the clear covering forming the front of the eye) will begin to take on a cloudy appearance. If not treated, the cornea may rupture, which often leads to permanent blindness in the affected eye.

Pinkeye outbreaks may occur at any time of the year, but the highest incidence is usually during the warmer months of the year. This seems to be because of the variety of contributing factors which are more common in the warmer seasons of the year.

One of these contributing factors is the increased exposure to sunlight. The ultraviolet rays from the sun make the cornea more susceptible to infections, so providing shade for stock will be helpful in prevention.

Another factor in pinkeye infections is the common face fly. These flies irritate the eyes of cattle, making them more susceptible to infection but also transfer infections from eye to eye. This fact spreads the infection quickly among susceptible cattle.

Cattle with more pigment about the eye seem to be more resistant to pinkeye infections. An exception to this is the Jersey breed. Although the area about the eye is pigmented, their eyes are very prominent, which may expose the cornea to more sunlight.

Young stock are usually more susceptible to infections than are older animals. This may be because the older animals have developed some resistance to more infectious agents because of previous exposure. I have often seen pinkeye outbreaks start in the young stock only to spread to the older animals. Primary control measures should perhaps be aimed toward the young stock.

Other conditions that cause irritation to the eyes of cattle and are considered important are dusty conditions, tall pasture grasses, and windy conditions. I have also seen outbreaks in cattle feeding from large round bales. Reaching into the bales as they ate was causing eye irritation, which was leading to infections. Individual animals may develop cornea injuries from feeding from the large bales so this must be

Dr. Arlen Mills

differentiated from pinkeye infections.

Prevention of pinkeye requires dealing with and eliminating as many of the listed causative factors as possible. This involves providing shelter, keeping pastures clipped, and controlling flies. Fly control may be accomplished by the use of ear tags or topical agents applied either individually or by the use of sprayers or "rubbers."

Vaccination to prevent infections is an option if the infectious agent is known. Available vaccines contain the bacteria Moraxella bovis, but as mentioned, this is not always the main problem. IBR virus can infect the eyes, so be certain that animals have been vaccinated for this disease.

Some believe that the "eye form" of IBR virus may be different than the usual respiratory form, but this has not been proven. Some herds have had outbreaks of eyes infected with a strain of Mycoplasma. The pinkeye vaccines available will not prevent these other infections. In the last several years, another type of related bacteria has been isolated by some from resistant cases of pinkeye. Vaccine companies are trying to adapt their vaccines to include these new strains.

For vaccination to be of help in pinkeye control, it must be done before problems occur. Two doses need to be given at the beginning of the season — now. Couple this with control of the contributing factors listed for best success.

The primary factor in successful treatment of infected eyes is early intervention. Treatment given when the first cloudiness is seen in the cornea is usually successful. Treatment may include an injection of long-acting tetracycline, fly repellents applied to the face of the affected cattle, and protection of the eye. This protection may be confinement to an inside pen or an eye cover glued over the eye.

If infection is further advanced, antibiotics injected into the tissue about the eye by your veterinarian and then sewing the eye closed for a week can salvage many an eye.

Now is the time to think about pinkeye. If it was a problem last season on your farm, it most likely will be back this year unless you take some preventative actions now.

Dairy Farmers: Relieve Heat Stress On Cows

UNIVERSITY PARK (Centre Co.) — The highest producing cows are the ones most vulnerable to the damaging effects of heat stress, warns Dennis Buffington, professor of agricultural and biological engineering. Milk production decreases as heat stress increases. Buffington points out that even greater economic loss results from the reduction in cows' conception rates as heat stress rises.

"First and foremost, the cows need to be protected from direct solar radiation," he said. "The shading system must be designed so that the animals have full access to quality feed and water while in the shade. Sufficient floor space needs to be provided under the shade structure so that the animals do not crowd together to stay in the shade.

"The underside of the roof needs to include insulation material to reduce the thermal radiation load on the cows. Finally, the shade structure needs to be high enough and include a ridge opening so that natural ventilation will be enhanced."

Evaporative cooling systems to reduce heat stress levels on cows are common in the southern U.S., but few are used by Pennsylvania dairy farmers, according to Buffington. He anticipates that evaporative cooling systems will become more popular in Pennsylvania as production levels of cows increase and as producers search for effective ways to reduce heat stress.

The evaporation of just one gallon of water per hour at 85 degrees provides nearly the same cooling effect as a ¾ ton air conditioner unit. "This amount of cooling can handle the heat produced by, on average, two lactating cows," he said. "The actual amount of water that can be evaporated depends on the humidity level of the air."

Different approaches to providing evaporative cooling for dairy cows have been used over the past several decades. Buffington believes the use of a sprinkler or misting system in conjunction with forced ventilation is most effective. "It is not sufficient simply to cool the air with evaporative cooling and hope to significantly reduce the damaging heat stress effects on the cows," he said.

"It is essential to wet the cows and to provide forced ventilation to speed up the rate of evaporation," he said. "The direct wetting of the cows cools them only a limited amount — it is the rapid evaporation of the water that really does the cooling. The need for rapid evaporation is why it is essential to use fans in conjunction with sprinklers or misters. Natural ventilation is not sufficient, at least in the climates of the Northeast, to provide the quick evaporation."

During heat stressing conditions, cows must be wetted intermittently so that the water can evaporate from the surface of the cows. Effective evaporative cooling systems generally provide a spray of water for about a minute every three or four minutes with the fans running continuously. An evaporative cooling system should be developed with enough flexibility so that the wetting durations and intervals can be easily modified in the field.

The water spray should be directed onto the back and sides of each cow, Buffington explained.

"Ideally, all the water should evaporate on the back and sides of a cow so that none of the sprinkler water comes down to the udder because of the danger of contaminating the teat openings with bacteria from the hide," he said. "It also is important to keep the floor surfaces and bedding materials dry."

Buffington contends that investments in effective systems to relieve heat stress for dairy cows will pay dividends in increased cow comfort, milk production, and conception efficiency.

"As the production levels of dairy cows increase, they become more vulnerable to heat stress," he said. "Therefore, it behooves dairy farmers to utilize evaporative cooling systems to reduce the effects of heat stress on their animals."

Growers To Conduct Wool Pool

CARLISLE (Cumberland Co.) — Cumberland Cooperative Sheep and Wool Growers will conduct their Wool Pool Tuesday, July 1, from 8 a.m.-11:30 a.m. at the Carlisle Fairgrounds along Rt. 34 in Carlisle near the H.R. Gutshall & Sons-John Deere Dealer.

Enter the fairgrounds by using the "K" Street entrance. Wool from all counties in south central Pennsylvania is welcome!

This year the pool will not be graded or weighed at the site. Each producer's wool will be graded and weighed at a later date by the purchaser, Greg Groenewold, Groenewold Fur and Wool Co., Forreston, Ill., the same as last year.

Call Donna Duncan (717) 243-8069 or any of the board of directors for any additional information or to get burlap bags. The directors are Robert Holtry, (717) 582-4039 (Perry County); Richard Myers, (717) 258-3850 (Cumberland County); Darlene Anderson, (717) 258-6967 (Cumberland County); Ben Bow, (717) 867-1305 (Lebanon County); Ken Staver, (717) 534-2619 (Dauphin County); Waldo Hartman, (717) 334-7221 (Adams County); or Steve Ebersole, (717) 741-1407 (York County).

Prize Winner Selected

EPHRATA (Lancaster Co.) — *Lancaster Farming* recently selected the winner of a free one-year subscription to the newspaper at Family Farm Days at Oregon Dairy. The winning entry goes to Paul Gantert, Stevens. Congratulations!

Fore FFA Golf Tournaments To Host FFA Chapter Teams

STATE COLLEGE (Center Co.) — The Pennsylvania FFA Foundation, Inc. has added a new feature to the Fore FFA 2003 Golf Tournaments — the Chapter Golf Challenge.

FFA chapters throughout the state have been invited to recruit teams to represent their chapters and to compete for $400 in Leadership Scholarships, as well as trophies, plus they will be eligible for all tournament prizes.

Chapter can recruit more than one team, but may only win one of the scholarships. The tournaments are limited to 20 chapter teams at the Hatfield tournament in Lancaster County and 10 teams at the Hoss's tournament at Scotch Valley. Teams will be accepted on a first-paid and space available basis.

The Hatfield Fore FFA Golf Tournament take place, Monday, July 14, at the Fox Chase Golf Course in Stevens, Lancaster County. That is a two-course event with Hawk Valley being the overflow course after 288 slots are filled in the order they are received. The FFA chapter teams will play at the Hawk Valley course.

The Hoss's Steak and Seahouse tournament is planned for Monday, August 4, at the Scotch Valley Country Club in Duncansville. This tournament is set up for 144 entries in the order they are received.

The scores of the teams representing FFA chapters will be reviewed by the golf pro, and the team with the lowest score will receive chapter challenge trophies. The FFA chapter that is represented by the winning team will receive $400 in Leadership Scholarships. They will also take possession of the traveling "Chapter Challenge Golf Trophy."

Each year the names of the winning team members and the chapter they are representing will place on an engraved plaque on the trophy. The trophy will be returned to the tournament each year to be awarded to the winner of the FFA Chapter Golf Challenge.

For more information on the FFA Chapter Golf Challenge, call Kerry Richards at (814) 880-0013.

To participate in the main tournament and/or to provide financial support for the fundraiser, contact the Pennsylvania FFA Foundation Inc., P.O. Box 10493, Calder Square, State College, Pa. 16805; phone/fax (814) 867-9230.

Open English, Western Horse Show Scheduled

DELTA (York Co.) — The Mason-Dixon Fairgrounds will be the setting for the 3rd Annual Open English and Western Horse Show on Sunday, June 29.

The event is slated to begin promptly at 8:30 a.m., rain or shine. The horse show is open to all breeds and is APHA PAC approved. AQHA rules will apply and proper show attire is required in all classes.

There are more than 50 classes including open, adult novice, youth, and beginner youth. Entry fees are $8 per class plus $2 office charge per rider. Debbie White of Dover Delaware will be the judge.

Premiums will be paid the day of the show after the last class.

The Mason-Dixon Fairgrounds are located on Route 74 in Delta. Food will also be available. All proceeds benefit the Delta-Cardiff Volunteer Fire Company. For more information, contact Deb Ohl at (717) 456-7202.