

N.E. Winter Dairy Management Schools Debut In Pa.

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LANCASTER (Lancaster Co.) — There will be only 95,000 dairy farms in the United States by the year 2005, according to Dave Galton, a Cornell University animal science department researcher.

Galton and other top dairy researchers from land-grant universities in the Northeast also say:

- Chlorox brand chlorine bleach is perhaps the best and most inexpensive pre-dip and post-dip solution around, though the National Mastitis Council will not endorse its use because the company has never conducted an official trial. However, Cornell has been using it on its research herds for years.

- To stay competitive, dairy operations need to experience a 10 percent growth per year.

- Strong profits in dairying are only being currently realized by those operations milking at least 400 cows.

- Fast-track Holsteins are on their way. Research being validated by Cornell shows that Holsteins can be raised and bred to freshen with a first calf at 20 to 22 months of age without hurting or stressing the animal in any way.

- No matter how he selects sires for his dairy herd, a dairyman using artificial insemination can only see his herd's genetics improve over time, according to the direction being pursued by the studs. (For more efficient genetic gain, use proven bulls on the heifers, the young sires on the cows.)

Though some of the experts' advice won't be found written down anywhere else, it represents a plethora of latest findings, opinions and tips for survival in the dairy production business offered through a series of two-day Northeast Winter Dairy Management Schools.

The schools were held locally and in several states during the past two weeks.

Sponsored by Cornell and Penn State universities, and the universities of Connecticut, Delaware, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont, there were 10 of the two-day schools were offered throughout the Northeast states, including four in Pennsylvania.

The school setting provided participants with first-hand insights into the opinions and views of those whose job it is to analyze dairy research data, instead of having the information filtered through news releases and extension agents.

It also provided a forum for laymen to press for further explanation about the experts' interpretations and findings on dairy research; allowed researchers to clarify any misunderstandings about research results; and to bring perspective to the vast and sometimes conflicting information.

While the educational programs are sponsored by the dairy extension faculties of nine Northeast universities, they aren't free.

Normal extension service activities provide a grass-roots clearinghouse for academic findings by the land grant universities.

The winter dairy management schools go even further, and the depth of information is practically on par with college classroom instruction.

More specialized than most any other extension-sponsored program, the intensity of the information and the level of explanation offered also carried a base price of

\$40 per person for materials, hall rentals and coffee breaks.

Each participant was given a book of 24 research papers and two papers for panel discussion: 12 papers presented by the authors to participants of the west program; 12 presented by authors to the East participants; and the talking recommendation papers for each program's panel discussion.

Additional, but optional, costs were for meals provided and for overnight accommodations.

At the West schools, the topics covered ranged from causes and treatments for two organisms which cause calf scours and are transmissible to humans and most farm animals; genetic progress; profitability; mineral nutrition recommendations; fertility in postpartum cows; fast-track heifer raising in Holsteins for optimum profit and performance; controlling feed costs, to using Dairy Herd Improvement Association records. At the East schools, there was some overlap of topics, but different authors of different papers and different experiences made the two program presentations unique.

East sessions included topics such as annual herd check-ups, an update on the use of hormones in postpartum cows, mastitis control, performance in milking parlors, silage additives, etc.

Although the schools received little pre-publicity in Pennsylvania, the Lancaster meeting attracted more than 40 participants who traveled from several states and counties to attend.

The detail offered for each subject was great.

Alice Pell, researcher with the Cornell University Department of Animal Science, started off the morning session discussing two health-threatening, yet apparently common, farm pathogens: Giardia and Cryptosporidium parvum.

She said the importance of the two pathogens related to two issues of major concern to dairymen: environmental concerns and profitability.

The two pathogens are protozoans which are easily transmitted, can contaminate water supplies and can cause severe diarrhea in animals and humans.

A cure for Giardia is not certain nor without risk, Pell said. There is no cure for Cryptosporidium parvum, one of several identified species, but believed to be of most concern to humans.

She said Cryptosporidia are at the top of the list because of a dual affect to water quality and herd health.

Water quality issues for the dairyman consist of the nutrient escape of phosphates and nitrates, pesticides and pathogens, which includes bacteria, protozoans and other diseases.

Giardia attaches to the intestinal lining.

She said that although Giardia was actually identified 300 years ago, it wasn't until recently that microbiological advances have allowed easy identification.

According to Pell, Giardia "is now the most frequently identified intestinal parasite in the United States and other parts of the world," she said.

Although there has been publicity on the one-celled parasite in recent years because of incidents of campers contracting it from drinking water from mountain streams, thus the name "Beaver Fever," the pathogen is apparently wide-spread and found rarely in beavers.

It is actually found to a high degree in muskrats, which few dairy farms do not have around, especially with trapping having decreased in many areas because of increased restrictions and low fur prices.

"We ought to call it "Muskrat Fever," Pell said.

About 60 percent of infections are blamed as coming from drinking water.

Cryptosporidia were not known about for as long as Giardia. She said an American biologist first identified it in 1907. But it affects 24 animals, including man.

On the farm, the disease can be carried and transmitted by all common wild and domestic animals.

According to a table included in the paper she presented, Cryptosporidium in cattle has been shown to be transmitted to cats, other cattle, dogs, goats, humans, mice, pigs, rabbits, rats, and sheep.

Likewise, humans infected with Cryptosporidium have been shown to pass it on to cat, cattle, dogs, goats, other humans, mice, pigs, and rats.

That doesn't mean that is exactly where the limits of infection end. She said all those animals can cross-infect each other.

It may mean controlling the movements and sanitation of all animals and people going near calves.

The most common form of transmission is from feces to oral, which isn't as difficult to occur as it may seem, because it doesn't have to be direct. It can go from the feces, wash into a stream, into a swimming hole, etc.

She explained that it also can come from contaminated food and water and the question is still open to the possibility of transmission of flies or other airborne transmission.

She said that in cattle, the dis-

ease shows up in young calves. The results of several studies showed an existing infection on farms from 10 to 60 percent of all calves.

The calves get scours, aren't as thrifty, etc.

The seven-life cycled parasite is most contagious when in the oocyte, or egg, stage in the manure, and it is difficult to kill.

Studies have shown that calves with Cryptosporidium have an average age of 17 days, and can shed the oocytes from 3 to 13 days old. The concentration of the infectious stage is 10,000,000 to 100,000,000 per gram of feces when calves are shedding.

If it washes into water, it can contaminate a large supply because the parvum species, the most dangerous, only requires from one to 10 oocytes to infect another host.

She said that most people raised on a farm probably have been infected, but developed an immunity.

However, small children, the aged, those with weak or weakened immune systems, such as people with AIDS, can die from the infection.

Calves with Giardia infections are found in calves aged 3 months to 5 months, but are unlikely to show symptoms. "Cryptosporidium is much more likely to show symptoms," she said.

AGA Adjusts TPE Program

REYNOLDSBURG, Ohio — The American Guernsey Association Board of Directors voted at the December board meeting to adjust the requirements for the breed's Total Performance Evaluation (TPE) program. These changes are effective immediately.

Guernsey herds will now have

Further, Pell said there is no known cure for Cryptosporidium and the cure for Giardia infections comes with a label warning that the medicine is also a carcinogen.

The only known sanitizing treatment of a calf holding area to kill Cryptosporidium is heat the manure to a temperature of 158 degrees for 10 minutes (although it does work a slightly sliding scale relationship); treatment with Hydrogen peroxide or ozone, which is messy; or use a 10 percent ammonia solution as a disinfectant.

The suggestions for management for Cryptosporidium is to reduce the risk — control or eliminate the number of cats, dogs, rodents and people near calves, isolate calves during the first weeks and quarantine suspected animals.

Every veterinarian should be able to easily test for both pathogens, she said.

Work is currently being done at Cornell to determine the efficacy of composting calf manure as a means of destroying the pathogens, though results won't be available for some time.

Other speakers were equally specific and detailed in their presentations.

Those interested in attending one of the schools in the future should contact their local extension office and request more information.

the option of being on DHI or DHIR to participate in the TPE program.

This means TPE herds enrolled in DHI are eligible for the same awards as DHIR herds. TPE documents performance, and promotes your farm name and outstanding Guernseys.

Soybean Canopy Essential To Improving Yields

ANDY ANDREWS

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GUTHRIESVILLE (Chester Co.) — During a hot summer day, if you can see the sunlight hitting the ground when the soybean plants are in full canopy, "I'll guarantee you are losing yield," said John Yocum, Penn State Agronomist.

Yocum spoke to farmers and other agribusiness representatives at the Chester County Crops Day at the East Brandywine Fire Hall on Tuesday.

Yocum spoke about the management of soybeans and weed control choices available at the crops day. The Landisville Research Station manager emphasized the importance of creating a good establishment and maintaining it with a variety of weed control techniques, in addition to several new weed control choices for 1993.

Yocum said weed control is the most important factor next to stand establishment, but stressed that seed variety, inoculation, soil quality, and seed placement all work together.

First, farmers must choose a weed- and herbicide-tolerant variety. However, no variety can compensate for poor management, said Yocum. Management starts with soil type (pH of 7, ideally), proper

inoculation, and seed placement. There should be about 153,000 plants per acre. Farmers must still consider seed count rather than weight. There should be 2½ seeds placed per foot of row.

Farmers who use grain drills in no-till face problems with correct seed placement, and must compensate by increasing volume of seed placed. The seed should be placed from a 1- to 1½ -inch depth, ideally. Placing seeds deeper puts them in jeopardy of germinating because the seed genetics aren't equipped to reach to the surface.

The important factor remains uniform emergence. Farmers should inspect the seed depth and placement on a regular basis when planting.

Also, using a rotary hoe to dislodge crusting and allowing the plants to come to full germination helps, according to Yocum.

Planting date can increase yields. The plants are less susceptible to frost damage than corn. However, unlike corn, if soybean plants freeze, they have to be replanted.

Studies at Penn State looked into some of highs and lows of soybean yields over the course of three years. The high obtained was 61.8 bushels per acre and the low about 50 bushels per acre.

Yocum spoke about the availa-

bility of two new products from Sandoz — Frontier (a preemergence herbicide) and Clarity (postemergence).

Also at the crops day, Dr. Greg Roth, Penn State agronomy extension specialist, spoke about corn yield management and troubleshooting corn production problems. Walter Wurser, Chester agent, presented a video on field sprayer selection, and Cheryl Fairbairn, Chester agent, spoke about checking sprayers.

Chester County 5-Acre Corn Club winners were announced. They are, first place, Nelson Beam (185.3 bushels per acre in the ear/hand harvest class with Pioneer 3245); second place, William Beam (175.9 bushels per acre in the reg. shell harvest class with Doebler's 75 XP); and third place, Ralph Petersheim (174.9 bushels per acre in the ear/hand harvest class with Pioneer 3293).

Also, the Chester County Conservation District honored C. Barclay Hoopes and Family with the 1992 Conservation Farmer of the Year Award. Hoopes operates a dairy farm in New Garden Township on approximately 282 acres. In 1990, Hoopes agreed to participate in the conservation district's Red/White Demonstration Farm Project, set up to showcase best management practices to conserve soil and improve water quality.