

Dairy Vaccination Program Should Be Part Of Overall Herd Management Plan

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LANCASTER (Lancaster Co.)

— No amount of vaccination use will make up for bad management, most veterinarians agree.

Importantly, producers should look at vaccines not as cure-alls but as "tools as part of your total management program," said Dr. Robert Munson, VMD with the University of Pennsylvania's New Bolton Center in Kennett Square.

Munson spoke to about 100 dairy producers and agri-industry representatives Tuesday at the first of the two-part Penn State-sponsored Lancaster County Dairy Days at the Farm and Home Center.

Munson told producers to "talk with their vet" about how to implement an overall vaccine program. "Sit down and decide what your aims and goals are, and move along with it."

Many times, producers spend time vaccinating and don't think beyond that. But when we vaccinate, Munson said, "do we immunize?"

The goal of a vaccine is to provide a protective immunity on several levels to fight natural infection. But all too often producers want to immunize for everything. However, in the end, does the cost and risk of using vaccine outweigh the costs of having the actual diseases present in the herd?

While there are vaccination programs for leptospirosis and bovine virus diarrhea (BVD), there are concerns and questions about whether side effects can be present that could affect other aspects of herd health.

Munson noted that he prefers the use of modified live virus vaccine on heifers. Those vaccine types provide long-lasting immunity, few inoculating doses are required, and there are effective administration rates (oral and nasal) with low probability of hypersensitivity. Some of the disadvantages include a concern for abortions, a limited shelf life, the possibility of the vaccine reverting to a virulent state, and other reactions.

The other type of vaccine program available, a killed vaccine, is unlikely to cause disease, is stable in storage, yet has some disadvantages. Munson noted they include short-lived immunity, hypersensitivity, and the possibility of local tissue reaction at the injection site, among other factors. Also, many producers forget the importance of multiple doses to help achieve the desired immune response.

Importantly, vaccines should only be used as part of a program when suggested by a responsible veterinarian.

Producers should be aware that there is no BVD vaccine that protects against all serotypes of BVD virus in the field.

Suggestions Munson has is to use a modified live virus vaccine in heifers, not young calves. Begin vaccination of heifers after five months of age — use leptospirosis vaccine at this time and follow the initial vaccine with a booster two weeks to two months after the initial dose.

For administering vaccines, producers should design a system on the farm to expedite the vaccine administration — thus avoiding a "rodeo" that sometimes occurs for the young stock and the frustrations of trying to administer a vac-

cine without proper planning.

"You shouldn't try to vaccinate for everything," Munson said. "Design a program that fits your management system."

Munson also reviewed bovine virus diarrhea (BVD), its causes, symptoms, and treatment.

Importantly, BVD can wreak havoc in a herd one way: it's carried by persistently infected (PI) animals in the herd and can infect "herdmate to herdmate and herd to herd," he said.

Those PI animals "shed large quantities of virus their entire life," even though only 1-2 percent of the herd can be actively shedding the virus at any given time.

BVD is introduced into the herd commonly when buying bred heifers, Munson noted. If purchasing heifers, ensure through documentation that those heifers have been classified BVD-free.

BVD is the "most costly virus disease in Pennsylvania cattle," said Munson. All BVD is not equal, he noted, and affects the herd differently, depending the stage of gestation at the time of exposure.

Common symptoms include abortions, poor conception rates, cows returning to heat after being confirmed pregnant, abnormal heat intervals, stillbirths, or small calves. In any case, the virus is often difficult to isolate even if the producer supposes it is present in the herd.

To eliminate BVD from a herd, Munson noted that it takes a long time and perseverance because it's not easy to develop and identify.

More likely, the virus is being shed from the younger stock, because BVD is primarily a disease of young animals. The older ones infected die off after they begin shedding the virus. To eliminate the virus, producers must have a vaccination program in place "and follow it as closely as possible," he said.

Also at the Lancaster County Dairy Day, another New Bolton Center veterinarian provided information about a new program to certify Johne's Disease-free herds in the state.

According to Dr. Robert Whitlock, DVM of New Bolton and Johne's Disease expert, Pennsylvania as a state has been "fairly aggressive about Johne's Disease" control methods. Out of 180 herds in the state already signed up, 20 herds test negative.

Producers simply need to sign an agreement between them and their veterinarian and testing is available at no cost.

Eventually, Whitlock noted that someday the list of certified Johne's Disease-free herds could be listed in newspapers.

Johne's Disease, Whitlock explained, is a chronic bacterial infection of the small intestine of ruminant animals. The disease has a long incubation period of 2-10 years. It was first identified by Dr. Johne in 1895.

Whitlock spoke about a Dairy NAHMS survey in 1996 conducted with 1,200 producers in the country. Of the producers, 55 percent were fairly knowledgeable about Johne's Disease, 35 percent heard about it, and 10 percent never heard about it at all. More education is needed, according to experts.

Johne's, a clustered disease, often goes undetected in the herd. Many herd owners could have it in



Lancaster County Dairy Day speakers, from left, Dr. Robert Whitlock, DVM from New Bolton Center; Dr. Robert Munson, VMD, New Bolton; and Glenn Shirk, Lancaster County dairy extension agent.

their cattle and not know about it. However, losses because of the disease can be substantial.

In terms of body weight at slaughter, the disease can cost producers \$45 a cow. Decreased milk production can run from \$200-\$300 per year per cow.

Johne's is caused by a bacterium, *Mycobacterium paratuberculosis*. It's a "first cousin" to tuberculosis, Whitlock noted.

The bacterium can be present in animals and 95 percent of them actually show no signs of the disease, according to the New Bolton Center veterinarian. About five percent will show the symptoms of weight loss, intermittent diarrhea, and some will provide the "classic" image of infection — emaciation.

The bacterium infects the small intestine and actually works to inhibit the uptake of nutrients. Basically, the animal starves to death.

The problem in herds is caused by the bacteria shedders, animals that spread the bacteria readily

through manure. Young animals can ready digest the bacteria if exposed to the manure.

In the words of Dr. Christine Rossiter, from New York State, "All manure is guilty until proven otherwise," noted Whitlock.

It's important to isolate young stock from manure by providing good, clean, and dry calf hutches. Also, keep the bedding in the pens clean. Provide safe colostrum (don't pool colostrum). Keep calves and heifers away from adult cows.

Prevention of the disease starts with a closed herd. If replacements are purchased, inquire about the disease. Use good biosecurity on the farm. And ask those "hard questions," he noted, of your herd: could you have it and not know it? Can Johne's be successfully controlled? Whitlock indicated that, yes, it can be controlled, but it takes a number of years.

For the control of mastitis in the herd, it's important to provide clean, comfortable bedding for cows. The rate of mastitis in a herd is "clinically related to the bacter-

ial counts in the bedding," according to Dr. Michaela Kristula, DVM from New Bolton Center.

Kristula said that, for clean bedding and reduced bacterial count, "sand is the absolute best" bedding, she said, with very low bacterial numbers. A six-inch layer over a dirt floor (for proper moisture drainage) is ideal.

Kristula pointed out the prevalence of bacteria in a short time with the use of sawdust. But one producer at the Dairy Day noted the uses of lime and sawdust as a good combination. The veterinarian reviewed proper procedures for pre- and post-dipping of teats. She emphasized the importance of proper cleaning methods, hygiene, and other factors.

Dr. Robert Whitlock spoke about the effects of bovine leukosis virus on the herd, how it affects cows and various prevention and control measures.

Part 2 of the Lancaster County Dairy Days is scheduled Tuesday, March 3 at the Farm and Home Center.

New, Beginning Farm Workshop

GRANTVILLE (Dauphin Co.) — One of America's most dynamic and innovative farmers will address the New and Beginning Farmer Workshop on March 7, 1998 here at the Holiday Inn.

Promoting food production that is environmentally, emotionally, and economically enhancing for both producer and consumer, Joel Salatin is a third generation farmer who enthalls audiences with his presentations about his family's 550-acre Virginia farm.

A word craftsman, Salatin describes his diverse farm enterprises with ear-catching phrases: salad bar beef, pastured poultry, pigacator pork, and pastured rabbits. Through what he calls "relationship marketing" to 400 "cheerleader" customers, he receives full retail dollars for everything the farm produces.

Pennsylvania Agriculture Secretary Samuel E. Hayes Jr. will welcome the expected crowd of 300 new and beginning farmers to the day-long event scheduled from

8 a.m. to 4:30 p.m. Other speakers will tell workshop attendees how they worked into their family's business or how they started from scratch.

Afternoon sessions will supply helpful information to beginners on dairy, fruit, vegetables, beef, poultry, hog, and other types of farming enterprises. In addition to production information, business planning and farm management information will be presented.

Salatin will round out the con-

ference with his discussion on building your enterprise for the next generation. He said "We can talk all day about the environment and clean food, but if our farms are not fun, not profitable, or too much work, our children won't want them and we're spitting in the wind. Romancing the next generation into farming is the ultimate test of sustainability."

For more information about this workshop, call Pennsylvania Farm Link at (717) 558-7726.

Tree Seedling Sale

LANCASTER (Lancaster Co.) — The Lancaster County Conservation District's Annual Tree Seedling Sale is in progress.

The tree sale provides Lancaster County residents with plant materials for conservation plantings. Proceeds benefit the Conservation District's environmental education activities in Lancaster County. Seedlings offered include coni-

fers, hardwoods, ornamental flowering fruit trees, potted stock, and groundcover. Only prepaid orders are accepted.

Deadline for placing orders is March 20. Orders can be picked up on Friday, April 17, at the Kiwanis Pavilion in the Lancaster County Central Park. To receive an order form, call (717) 299-5361.