

Penn State Cooperative Extension Capitol Region Dairy Team

COULD LEPTO BE CAUSING YOUR BREEDING PROBLEMS?
Dr. Arlen Mills
Capital Region
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Lebanon

About all farms I visit vaccinate for lepto on a regular basis. But in spite of a regular vaccination, lepto can still be a problem.

Most vaccines used contain five different strains of the lepto organism. One of these types or strains has been known as lepto hardjo. It has been known for years that cattle are the normal host of this type of lepto and can carry the organism and shed it into the environment around them. Our current vaccines have not been shown to be effective in the control of lepto hardjo.

The lepto hardjo strain has recently been better defined and re-named as *Leptospira borbopetersenii* serovar *hardjo* (type *hardjo-bovis*). Lepto infections have been shown to cause chronic reproductive problems in infected herds. This can be seen as early embryonic death, resulting in an increase in services per conception. Infected cows may be bred and may miss a heat only to be seen in heat later. It may also cause an occasional abortion and the birth of weak calves that usually do not survive.

Also linked to lepto hardjo-bovis infections is a type of masti-

tis. Affected cows go off-milk, and may be off-feed for several days. These cows will eventually start eating but rarely return to normal milk production.

If any of these symptoms are seen in a herd, diagnosis has been a problem. Cattle do not develop a good immune response to lepto infection. Even taking two blood samples three to four weeks apart has not been helpful as it often is for other infectious organisms.

Researchers at Michigan State University have determined a method to collect urine from suspect cows and check for the lepto organism. The urine must be collected after giving cows Lasix to dilute the urine to flush the organism from the cow's kidneys. Herds where lepto is suspected as causing reproductive problems need to consider collecting urine on several cows to submit for testing. This can be done along with blood tests to check for BVD and Neospora.

Lepto vaccines currently available may not protect against the lepto hardjo-bovis strain. We know that vaccination does not prevent infected cows from shedding the organism in urine and uterine secretions. So current vaccination use may only give us a false sense of security. Some believe that many dairy heifers are exposed and infected with lepto hardjo-bovis at an early age before most producers even begin

vaccination.

Fortunately, a new vaccine will soon be available that will protect against lepto hardjo-bovis infection. This vaccine will also stop shedding of cattle already in-

fectured. The initial vaccine will apparently contain only the new strain and will have to be used in addition to the available five-strain lepto vaccine.

If you are having trouble get-

ting cows pregnant, you may want to discuss the possibility of lepto hardjo-bovis with your veterinarian. Make sure that you also rule out chronic BVD and Neospora infection as well.

Pennsylvania Equine Survey Summarized

Dr. Ann M. Swinker
Extension Horse Specialist
Penn State

Editor's note: Pennsylvania Horse Power was developed for promoting and educating people on the size, scope and economic impact of the equine industry in Pennsylvania.

The information found in *Pennsylvania Horse Power* is a summary of the results found in the "2002 Pennsylvania Equine Survey" in addition to other specific facts noted.

The "2002 Pennsylvania Equine Survey" was conducted by the Pennsylvania State University. The Pennsylvania Department of Agriculture, through the State Horse and Harness Racing Commissions, contracted with The Pennsylvania State University to conduct the study.

Look for the second half of this summary in an upcoming issue of *Lancaster Farming*.

STATE COLLEGE (Centre Co.) — Horses are a huge force in Pennsylvania's culture and economy. Just as horses were important enough to our forefathers to include on Pennsylvania's State Seal, this study suggests that the state's thriving equine industry can help enhance the quality of life for future generations.

This study shows that the number of equine has increased 27 percent in the last ten years. More horses mean a stronger demand for production agriculture and the infrastructure that supports it. Most Pennsylvanians agree that more farmland and a strong farm economy are good for

everyone's quality of life.

Economic Value

Overall, the direct and secondary contributions of the state's equine industry are estimated at more than \$1.12 billion in revenue (output), of which nearly \$615 million is value-added.

This translates into 20,300 jobs that compensate state workers with \$412.2 million.

The racehorse survey indicated that this portion of the industry generated \$197.4 million in output and \$100.6 million in value added. This activity directly supported 4,740 jobs. Accounting for multiplier effects, the racing industry supported an additional \$147.1 million in output, of which \$87 million was value added, and 1,690 additional jobs.

The general population results indicated that the industry directly generates \$445.5 million in output, of which \$229.9 million is value added. This activity provides 10,220 jobs. And the ripple effects generate still more economic activity, supporting \$334.5 million in output, of which \$197.6 million is value-added, and 3,650 additional jobs.

Equine Population

The 216,000 equid living in Pennsylvania represent approximately 50 different breeds, encompassing horses developed in

this country by pioneers and Native Americans as well as horses imported from around the world.

The American Quarter Horse at 40,110 head, represents the most popular light horse breed in the state, followed by Arabians and Half Arabians at 11,154; Morgans with 10,136; Thoroughbreds (non-racing) at 9,567; Mules/Donkeys with 8,665 head; and Appaloosas with 7,985.

The survey respondents, identified specific other breeds and/or grade horses totaling 7,248 head; a large portion of these are light horse breeds.

Draft horse breeds totaled 11,185 head; Belgians with 6,202 head were the most popular followed by the Percherons with 3,000 head.

Pony breeds accounted for 10,577 head (Welsh 3,582, Hackneys 1,635, Shetlands 1,538 and other breeds at 3,822). There were 3,450 Miniature horses reported.

Pennsylvania's Racehorse Breeds Pennsylvania's racehorse industry included 26,365 head of horses. There were 14,815 and 11,550 head of Standardbreds and Thoroughbreds, respectively.

An additional 6,317 Standardbreds and 9,567 Thorough-

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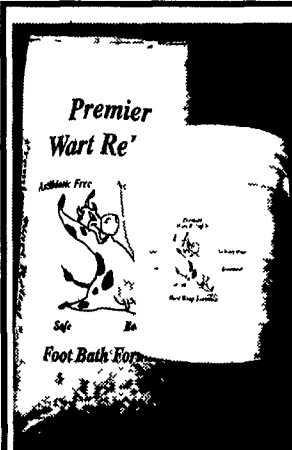
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Wrap Formula Protocol

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Footbath Formula Protocol

The footbath formula is designed to be used in the dairy's footbath initially to eliminate the existing warts and as a maintenance product to reduce the likelihood of reoccurrence. Mix 24 lbs. of Premier Wart Relief™ footbath powder per 50 gallons of water (12 lbs. per 25 gallon footbath). Change as necessary to maintain a clean and effective footbath.

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Wednesday ~ 10 a.m. - 3 p.m.

August 22, 2003

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