



FOCUS

Another Producer Eradicates OPP from his Highly Productive Flock

By Holly Neaton, DVM, with Judy Lewman

Tom Vaassen started farming near Lancaster, Wisconsin with about 100 ewes in 1985. Working as a lineman for the local power company, he decided to try farming full-time so sold the sheep in 1992 and started milking Jersey cows.

Deciding that sheep were more adaptable to his family's schedule, in 2003 he sold the

cows and started running approximately 400 Ile de France ewes using a modified STAR system for breeding and lambing.

Tom had a good market for his year-round supply of lambs but noticed some of the ewes were unable to raise twins due to lack of milk and hard udders. He was culling adults at too high a rate and realized he needed to keep 25%

of his ewe lambs for replacements just to keep his adult numbers at 400.

About 2 years ago he read an article by Clark Bredahl in *The Shepherd* magazine (http://oppsociety.org/download/bredahl_shepherd_may_2018.pdf) that described his problem and decided to test some of his suspect ewes with the 'Elitest' ELISA at the U of



MN lab. That group of 56 came back 82% positive for OPP.

Making a management decision to cull the flock down to 300 ewes, he had the rest of his ewes tested in July 2018 and found 88% of them were infected with OPP, unsettling as the Ile de France is reported to be one of the “less susceptible” breeds. More encouraging was the fact that 87 ewe lambs on hand were also tested and found to be only 20% positive.

Selected test-negative lambs were retained. And as the positive adults were too many to cull, he lambed some of them out in November 2018 and weaned at his usual 43-73 days. All these ewes were shipped out in February 2019 after weaning. The remaining adult ewes were bred and lambed in February 2019, then also shipped out after their lambs were weaned in April.

Having continued to test and cull ewe lambs, Tom now had the beginnings of his new replacement flock. After talking with another Ile de France producer that he purchased rams from and was test-negative for OPP, Tom realized it would be very expensive and difficult

to find healthy ewe lambs. This producer also reported his records over the years showed no difference in future production between single or multiple born ewe lambs.

So Tom decided to retain all his ewe lambs born to the now gone positive ewes and test them for OPP. Only 19-22% of these first-generation lambs were found to be positive, which concurs with the research done at USDA MARC in 2012 that showed only 10-30% infections occur from dam to lamb versus 70-90% infections occur from adult-to-adult contact.

Culling out the positives from each new group, he has now tested most of the negatives two or three times and continues to monitor. Only one glitch occurred where a positive lamb was left in the negative group by mistake, proving that carefully checking lab results and having good IDs on the sheep is essential for eradication.

The Vaassens operate a 120-acre farm in Southern Wisconsin. 47 acres are tillable and the remainder is split into four pastures where the ewes graze. All lambs are fed out

in lots. The Lancaster Veterinary Clinic has been extremely helpful in his mission to eradicate OPP. Dr. Sally Harper has helped review test results and make recommendations, while Office Manager and CVT Jill Kruse-Drinkwater has collected all the blood samples and provides support in handling the sheep.

Only one ewe is left from the Vaassens' original flock of 400. She has tested negative throughout this whole project and gets to stay on the farm.

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About Ovine Progressive Pneumonia

From the OPP Concerned Sheep
Breeders Society

General

Ovine progressive pneumonia is caused by a lentivirus, OPPv, resulting in life-long persistent viral infection. It can result in mastitis, respiratory distress, swollen joints, and/or “thin-ewe syndrome” in mostly older (>2 years) infected sheep.

Prevalence

A 2001 study found that 36% of the flocks in the U.S. were infected with the OPP virus. Incidence of infection increases with ewe/ram age due to sheep-to-sheep transmission. In some flocks the prevalence can approach 100%.

Susceptible Breeds

Any breed of sheep can become infected with the OPP virus. Breed-specific genetic

susceptibility studies are ongoing, but differences in viral strains as well as flock management practices also need to be taken into account.

Primary Transmission

Only about 10 to 30% of transmission is from infected dams to lambs. Most occurs when young replacement ewes join the infected breeding flock. Therefore, contrary to earlier thought, it's possible to raise test-negative lambs from infected test-positive ewes.

Other Transmission Routes

Besides milk and colostrum from an infected ewe, which does not always pass on OPPv, transmission can occur via respiratory secretions (coughs) and multiple use of needles and taggers. The virus does not survive long in the environment.

Clinical Signs

Symptoms are observed primarily in mature sheep: progressive weight loss while maintaining a normal appetite, uniformly hard udder with little milk, exercise intolerance when forced to move. Some infected animals exhibit no signs.

Diagnosis

A diagnosis of infection is usually made by identifying antibodies in the blood. However, the presence of antibody does not convey immunity. We have found the Elitest® ELISA crucial to success of the new eradication strategy described on our ‘Library’ page.

Treatment

There is no effective treatment or vaccine for OPP. Once a ewe begins to exhibit clinical symptoms it's unwise to breed her for “just one more lambing” as the outcome is likely to be unsatisfactory on many levels.

Control or Eradicate?

Concentration should be on eradicating, not controlling, the virus or you will be right back where you started in a few years. We now know that eradication can be accomplished without orphan rearing or premature culling of test-positive ewes.

Eradication Guidelines

There are varied routes to an OPP-test-negative flock, no one-size-fits-all. See the oppsociety.org website ‘Library’ page for more information, including step-by-step testing protocol and management guidelines.