



# Which Testing Strategy Should I Use?

by Whitney Hull and Julie Smith, DVM, PhD

Use an individual animal test to guide management decisions



Use environmental samples to screen sources of replacements or to assess environmental contamination



## IS THIS ANIMAL INFECTED?

- 1                      2                      3



**1 Fecal Culture or PCR**  
Submit samples from individual animals. Some labs can pool up to five samples per test.

**2 Postmortem Tissue Culture**  
Use to test cows that die on farm. Can confirm cases or find the first case in a herd with no history of Johne's disease.

**3 Milk or Serum ELISA**  
These samples are generally easier to handle than fecal samples. Consult with a veterinarian to interpret results.

## IS THIS HERD INFECTED?



### Pooled Fecal or Environmental Samples

Collect manure from areas where the herd or specific groups of animals commingle and also from manure storage.

## Johne's Test Strategies

### Polymerase Chain Reaction

PCR tests use a specific DNA probe to detect a matching DNA sequence. It is faster and somewhat less expensive than culture with few false positives. A negative test means the animal is not shedding MAP; it does not mean the animal is uninfected.

### ELISA (Enzyme Linked Immunosorbent Assay)

Most ELISAs are designed to detect antibodies generated by the immune system in response to a specific infectious disease agent. They are relatively inexpensive, but may produce false positive and false negative results.

### Bacterial Culture

Used to grow MAP on special media under specific temperature and oxygen conditions. MAP is very slow growing, and it can take up to 16 weeks to get results. Overgrowth by other bacteria can be a problem. Fecal or tissue culture is the most expensive test, but has very few false positives.



This material is based upon work supported by the National Institute of Food and Agriculture, U.S. Department of Agriculture, through the Northeast Sustainable Agriculture Research and Education program under subaward number ONE22-416-AWD00000495. Any opinions, findings, conclusions, or recommendations expressed in this publication are those of the author(s) and do not necessarily reflect the view of the U.S. Dept. of Agriculture.

Issued in furtherance of Cooperative Extension work, Acts of May 8 and June 30, 1914, in cooperation with the United States Department of Agriculture, University of Vermont Extension, Burlington, VT. University of Vermont Extension, and U.S. Department of Agriculture, cooperating, offer education and employment to everyone without regard to race, color, national origin, gender, religion, age, disability, political beliefs, sexual orientation, and marital or familial status.