# Facts on Johne’s Disease

## Cause
- **Mycobacterium avium** subspecies *paratuberculosis* (MAP)
- Infects all species of ruminants
- Shed in the manure of infected animals and contaminates the environment
- Can survive up to a year in cool, wet environments.
- NO TREATMENT/ NO COMMERCIAL VACCINATION

## Transmission
- PRIMARY: Ingestion of manure contaminated feed or water (fecal-oral)
- Also, colostrum or milk from infected cows and *in utero* transmission by infected cows.
- Animals <6 mos. of age have highest susceptibility to infection
- Animals likely shed the bacteria in feces before showing clinical signs.

## Clinical Signs
- Weight loss, chronic diarrhea, and death
- Due to thickening of the intestine wall and reduced absorption of nutrients
- Age of onset of clinical signs depends on age and dose at time of exposure, genetics, and stress; Incubation period ranges from 6 months - 4 years

## Diagnosis
- Tests detect either the presence of the actual bacteria or the animal’s response to the bacteria (see back)
  - Herd screening tests
  - Diagnostic individual animal tests
- Tests are available for blood, feces, and tissues
- Testing programs should address both clinically ill animals as well as subclinically infected animals (asymptomatic carriers of bacteria)

## Prevention
- Implement a biosecurity plan for your operation that identifies sources of disease risk and strategies to avoid introducing disease to your herd
- Inquire about the Johne’s status of a herd when purchasing new animals; important consideration must be given to bulls. They are with cows at time that calves are highly susceptible
- Raise newborn animals in a clean environment
- Avoid manure contamination of feed and water sources
- Identify and remove affected animals
- Maximize herd disease resistance through good nutrition and parasite control

If Johne’s disease is confirmed in your herd, work with your local veterinarian and the Montana Department of Livestock to establish a management plan that addresses testing and removal of infected animals, addition of replacement animals to the herd, and environmental management.
**Understanding Johne’s Testing**

Consider testing your herd for Johne’s disease if: you have symptomatic animals, you have purchased animals from a herd with Johne’s, or you want to establish the status of your herd. Work with MDOL and your veterinarian to develop a testing protocol for your herd.

<table>
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<tr>
<th>TEST</th>
<th>HIGHLIGHTS</th>
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| ELISA—tests blood for disease antibodies | • Rapid result  
• Best for animals >2 years of age  
• $8/head for 1-100, $6/head for 101-500, $4/head for >500 at MVDL  
• Potential for false positives and negatives as an individual animal test – use as a herd-wide screening test |
| *PCR— tests manure for bacterial DNA | • Few false positives  
• Fewer false negatives than blood test  
• Rapid result (one to two weeks)  
• Potential for pooling – follow up positive pooled samples with individual animal tests  
• $31.50 for individual samples at MVDL  
• $7.35 per animal when grouped in a pool of 5 ($36.75 for pool) at MVDL |
| *Post mortem analysis (histology or culture) | • Few false positives or negatives  
• Post mortem test |

*Animals positive on an official organism detection test test are not eligible for movement across state lines unless direct to slaughter per 9 CFR 80.3

Updated 6/1/2017