

# THE BIG THREE

## SMALL RUMINANT LENTIVIRUS - CASEOUS LYMPHADENITIS - JOHNE'S DISEASE

Small ruminant lentivirus, caseous lymphadenitis, and Johne's disease are three chronic, contagious, incurable diseases that can affect sheep/goats.. While the economic impact of the Big Three is not known, they are considered major production-limiting diseases that should not be ignored.



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| 1 | <b>SMALL RUMINANT LENTIVIRUS (SRLV)</b><br><b>Caprine arthritic encephalitis (CAE)</b><br><b>Ovine progressive pneumonia (OPP)</b> | <ul style="list-style-type: none"><li>• Slow developing retrovirus, 2 to 4 years</li><li>• Infects white blood cells and multiple organ systems</li><li>• Usually causes different symptoms in sheep and goats</li><li>• Spreads via body secretions, e.g., milk, coughs</li><li>• Diagnose via antibody blood tests</li><li>• No evidence that virus affects humans</li></ul>      |
| 2 | <b>CASEOUS LYMPHADENITIS (CL)</b><br><b>Cheesy gland</b><br><b><i>Corynebacterium pseudotuberculosis</i></b>                       | <ul style="list-style-type: none"><li>• Bacteria causing external and/or internal abscesses</li><li>• Can be a cause of wasting</li><li>• Spread through contact with pus</li><li>• Enters through cuts, scrapes, or mucous membranes</li><li>• Diagnose via bacterial culture of pus</li><li>• Vaccination interferes with blood testing</li><li>• Human cases are rare.</li></ul> |
| 3 | <b>JOHNE'S DISEASE (JD)</b><br><b><i>Mycobacterium avium</i></b><br><b>subspecies. <i>Paratuberculosis</i></b>                     | <ul style="list-style-type: none"><li>• Bacteria causing infection of small intestines</li><li>• Causes chronic wasting and death</li><li>• Long incubation period, 2 to 5 years</li><li>• Spreads fecal-oral route</li><li>• Diagnose via fecal tests and postmortem</li><li>• Unproven link to human health</li></ul>                                                             |



The best protection against the Big Three is strict biosecurity. All three are introduced to a farm via infected animals. Keeping the flock/herd closed to outside additions helps to prevent the introduction to these as well as other contagious diseases. If the flock/herd cannot be kept closed, new animals should ideally be sourced from farms that have verified test-negative flocks/herds. Quarantining new animals is always important. Blood testing can be used for herd-level diagnosis (screening). Tests of individual animals should be interpreted cautiously. Blood test results can be used to guide culling and other management decisions. Seek a veterinary consult. Eradication of the Big Three is possible and recommended, especially for flocks/herds selling breeding stock.