

***Salmonella Module Risk Assessment Guide***

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| Risk Factors | Risk Information  * Informational Statement * Intervention tactic | Risk factors on this farm (level of implementation) | Farm  Feasibility  Y,N |
| 1. **Biosecurity**  * Contact with non-resident cattle and other livestock * Resident Cattle & Calves * Pets and pests * Equipment | * Contact with non-resident livestock creates a risk for salmonella introduction into the herd * Avoid opportunities for fence-line contact with neighboring livestock * Do not commingle animals from different farms on pasture. * Isolate introduced livestock for 2 weeks. * Salmonella is easily spread between groups of resident cattle. Calves are a critical/frequent group at risk. * Clean equipment, clothes and boots *between all* groups, particularly when entering or leaving calf housing * Isolate sick cows and calves, handle them last * Aggressively monitor and treat fresh and sick cattle * Do not feed waste milk from sick cows to calves * Maximize colostrum intake and quality for calves * Maximize feed intake in the periparturient period. * Pets and pests and waterfowl can carry salmonella. * Restrict pet, rodent and bird access to stored feeds and feedbunks * Implement rodent and bird control program * Remove dead pests from feeds as soon as detected * Equipment can be a means of transmitting Salmonella around the farm and between farms * Equipment, and vehicles should be cleaned between groups of animals |  |  |
| **2.) Manure Management**   * Salmonella exposure | * Manure may contain salmonella.   + Restrict access to surface water (originating either on or off-farm) which may contain manure.   + Allow 30 days between spreading manure on pasture and grazing or between spreading on crops and harvest   + Prevent manure runoff throughout all facilities.   + Avoid tracking of manure through facilities on equipment, vehicles and boots |  |  |
| **3.) Feed Management**   * Contamination | * Feeds can become contaminated with salmonella in the feedmill or on the farm. * Feeding equipment, particularly calf feeding buckets and bottles, should be washed between uses * Do not use the same equipment for feed and manure   + - Ask feed suppliers about quality and pest control in their mills, storage and transport     - Avoid feed contamination by runoff, human, or equipment traffic or animals     - Do not use manure byproducts (solids) in cattle feeds |  |  |
| **4.) Water Management**   * Contamination | * + - * Water can become contaminated with salmonella from many sources         + Protect well heads from manure and septic runoff         + Restrict cattle access to surface water sources         + Restrict cattle access to flooded barnyards or lots |  |  |
| **5.) Facilities**   * Spread of salmonella | * Avoid walking across feed * Manure laden water may contain salmonella   + Provide good drainage to reduce puddling and build up of water in cattle areas eg, silage effluent, flush water, rainwater runoff * Wash and disinfect calf housing between calves to break cycle of salmonella growth |  |  |
| **6.) Quality Assurance**   * Antimicrobial usage * Culling cows | * Use of antimicrobials can increase resistance of salmonella and decrease competitive flora   + Minimize use of fed antimicrobials   + Always follow label directions when using antimicrobials * Non-ambulatory cows shed more salmonella * Cull cows in a timely fashion, before they go down |  |  |
| 1. **Public Health**  * Salmonella can infect humans | * Salmonella can infect farm families; especially young children and the elderly.   + Hands should be washed well, using soap and warm water and scrubbing for 15 seconds, before returning to the household.   + Outer garments and footwear exposed to infected animals and their discharges should not be brought into the household.   + Do not drink raw milk. |  |  |