

Farmer name : _____

Farm : _____

Date : _____

At the farm gate

Risk factor	Control measure	Measure adequate?	Details	
Importing Salmonella onto farm with infected cattle	Closed herd and no co-grazing policy	Y / N	If not feasible, develop an effective plan to screen and exclude animals from unknown or high-risk herds e.g. herds that trade or co-graze stock or with known history of salmonellosis	
	Quarantine new arrivals	Y / N	Isolate imported animals for 2 weeks and monitor for signs of disease (particularly appropriate for calves)	
	Manage to enable closed herd policy		Y / N	Rear sufficient replacements to calve so importing cows unnecessary
			Y / N	Optimise cow health and reproductive performance to avoid preventable culling and mortality
			Y / N	Optimise heifer rearing practices so that those replacements calve at optimum weight as 2-year-olds
Importing Salmonella onto farm with contaminated items or in contaminated feed or water	Avoid use of equipment or vehicles from other farms used for manure management	Y / N	If not feasible then clean and disinfect equipment before use	
	Prevent high risk off-farm vehicles from access to areas with livestock or cattle feed	Y / N	e.g. dead animal collection trucks, livestock trucks	
	Purchase feed from suppliers with good pest control management	Y / N		
	Fence off water courses	Y / N	Additionally, delay access to previously flooded pasture or conserved feed or crops for as long as practical	
	Provide cleaning and disinfection area for visitors	Y / N	Provide piped water, brushes, buckets and disinfectants adjacent to bobby calf loading facility, calf rearing facilities and entry/exit point to dairy	
Importing Salmonella onto farm via infected feral animals or birds	Maintain boundary fencing to high standard	Y / N	Ensure boundary fencing is adequate to prevent entry of large feral animals	
	Prevent access to feed by pests and vermin	Y / N	Use bird- and rodent-proof feed storage facilities, including bird-proof calf meal feeders	
		Y / N	Cover face of silage stacks between feeding out	
		Y / N	Apply appropriate pest management plans	

Inside the farm gate

Risk factor	Control measure	Measure adequate?	Details
High levels of environmental contamination with Salmonella	Promptly diagnose, isolate and treat suspected or confirmed salmonellosis cases	Y / N	Confirm cases and antibiotic sensitivity by bacteriological testing. Continue isolation for as long as feasible according to age group
	In an outbreak handle all animals as if they are shedding Salmonella	Y / N	Symptomatic animals are likely only the "tip of the iceberg" (see "Human health risk" below)
	Separate all sick from colostrum cows	Y / N	Include confirmed or suspect salmonellosis cases among the sick
	Use an 'all-in, all-out' calf management system	Y / N	Apply system to both healthy and sick calves. Remove bedding, clean, rest and disinfect pens between batches of calves
	Isolate high risk calves	Y / N	Calves born from cows suspected or diagnosed with salmonellosis should be isolated and considered at risk of developing the disease themselves
Infection spreading between stock via feed and water	Avoid contamination of feed with manure	Y / N	Avoid feeding cattle off the ground, or if not feasible, feed on fresh pasture breaks daily
		Y / N	Avoid staff walking across feed with manure-contaminated boots
		Y / N	Clean manure from vehicle tyres before they access feed storage areas
	Graze young stock separately from adults	Y / N	
	Prevent access of livestock to surface water or flood-affected feed	Y / N	

Inside the farm gate continue

Risk factor	Control measure	Measure adequate?	Details
Infection spreading to or between calves from environment and via milk and colostrum	Collect newborn calves > 1 times daily where feasible	Y / N	
	Clean and disinfect calf collection trailer after each collection	Y / N	
	Clean and disinfect teats of colostrum cows before milking	Y / N	Thoroughly disinfect all teat skin with alcohol-based teat wipes before attaching cups
	Ensure stored colostrum is properly preserved and nutritious	Y / N	If storing colostrum, use a preservative such as potassium sorbate (0.5% w/v) or consider using equipment to pasteurise colostrum/fresh milk or use powder milk replacer for calf feed
	Prevent contamination of stored colostrum	Y / N	Prevent access by birds or rodents and only use stirring equipment that has been cleaned and disinfected
	Clean and disinfect calf liquid feeding equipment	Y / N	Clean and disinfect colostrum- and milk feeding equipment before first use and frequently (daily where feasible) during ongoing use
	Don't feed calves raw waste milk	Y / N	Milk from sick or antibiotic treated cows is poor quality and possibly contaminated with disease-causing bacteria
Infection spreading and recycling between stock via manure and effluent	Ensure that dairy effluent or manure slurry or solids are spread on land according to best practice	Y / N	See https://www.dairynz.co.nz/environment/effluent/effluent-management-and-operation/ and comply with regional council requirements
Infection spreading between stock via equipment or personnel	Separate and hygienically manage sick animals	Y / N	Staff should handle or manage sick animals separately and after healthy ones and maintain strict hygienic measures
	Minimise the number of people entering calf rearing facilities	Y / N	
	Provide/ensure clean PPE used by anyone entering calf rearing facilities	Y / N	Includes boots, leggings, overalls, disposable gloves
Infection spreading between calves because of facilities design and management	Clean and disinfect calf rearing facilities and equipment after all calves moved outdoors	Y / N	
	Dispose of calf bedding in way that doesn't recycle pathogens back to livestock	Y / N	
	Install solid partitions between pens	Y / N	
Compromised animal immunity (particularly neonatal calves and transition cows)	Optimise body condition score of transition cows	Y / N	Ensure heifers and cows are in correct body condition at calving and that dry matter intake is optimal and consistent, especially over cow transition period
	Prevent heifer-adult cow dominance antagonism in critical periods	Y / N	Consider mixing rising 2-yr olds with mixed age cows a few weeks prior to transition period
	Provide sufficient space for all cattle to freely access feed from feed troughs	Y / N	Allow 0.7 - 1m per cow
	Optimally manage transition cow diseases	Y / N	Apply effective programmes to monitor and treat diseases, particularly common peripartum disorders such as dystocia, mastitis, metritis/retained placenta, milk fever
	Carefully manage mineral supplements (Mg, Ca, Na, Trace elements)	Y / N	Develop mineral supplementation programmes in conjunction with your veterinarian and/or nutritionist and follow recommended inclusion rates
	Optimise use of supplementary feeds	Y / N	Develop herd feeding programmes in conjunction with your veterinarian and/or nutritionist
	Optimise colostrum feeding of newborn calves	Y / N	Ensure every calf has 2 feeds of 2 litres of high quality (>22% Brix) colostrum within 12 hrs of birth
	Optimise comfort of calf rearing facilities	Y / N	Maintain clean/dry/well-ventilated (not drafty) housing and clean/dry/comfortable bedding for calves