

Introduction

Johne's disease or paratuberculosis is a chronic illness causing progressive loss of condition, reduced milk production and diarrhoea in cattle. The causative organism is present in the faeces of infected animals and can survive for more than a year in the environment. It can also be present in the colostrum and milk from clinically and sub-clinically infected animals. The bacteria are faeco-orally transmitted and young calves are most susceptible. As the disease has a long incubation period animals usually show clinical signs around 3-5 years of age. The Herdsure team can offer advice on management changes to reduce the likelihood of new infections around calving time and during the calf rearing period.

Protocols

Below are details of each protocol and the actions required. The Herdsure Management System is designed to ensure that this is a simple and clear process to follow by providing automatically generated sampling prompts and submission forms. Samples are returned to the laboratory using business reply labels, supplied by Herdsure. Blood samples should be collected in red top blood tubes and milk samples into preservative, e.g. Bronopol.

■ **Entry** - Herds with no history of Johne's disease enter Herdsure at Level 1 whilst those with a known history enter at Level 2. Blood or milk testing should not be carried out within 3 months of a tuberculin test. Milk testing is not advised for cows less than 10 days calved.

■ **Beef and dairy herds**

Level 1 - Establishing health status

Blood or milk samples are taken from all breeding animals over 2 years old. If all results are negative the herd progresses to Level 2a. If a small number of animals give a positive result they can be confirmed by testing of individual faeces samples. If testing confirms a positive serology result or is not undertaken, herds progress to Level 2b.

Level 2 - Improving health status through disease reduction strategies

Level 2a - Clear test at Level 1

Herds with no history of Johne's disease enter Level 2a as a result of a clear test at Level 1. Twelve months after Level 1 testing samples are taken from all breeding animals over 2 years old. If all the results are negative the herd progresses to Level 3. If one or more results are positive, the animals should be isolated and sampled for faecal testing or if slaughtered, post mortem samples examined for *Mycobacterium avium ssp paratuberculosis* (Map). If positive serology is confirmed the herd moves to Level 2b.

Level 2b - Known history or seropositive at Level 1

Annual blood or milk tests are performed on all breeding animals over 2 years old. Depending upon the herd replacement policy and number of female animals available, seropositives are culled and biosecurity measures are implemented. The offspring of these animals should not be kept as replacements. The herd will remain at Level 2 until three consecutive clear herd tests are achieved. Animals over 6 months old, showing clinical signs, should be isolated and examined by a vet and appropriate samples taken.

Level 3 - Monitoring and maintaining health status

Year 1: Blood or milk samples are taken from all breeding animals over 2 years old and 12 months after the test at Level 2. If any seropositive animals are detected they should be isolated and re-tested after consultation with a Herdsure Veterinary Consultant. If the animal is slaughtered, post mortem samples are tested and if any of these tests are positive the herd returns to Level 2b. If all animals test negative, the herd remains at Level 3.

Subsequent years: Future testing may vary according to how many years a herd remains clear at level 3.

Biosecurity

The farmer and veterinary surgeon should work together to ensure good biosecurity. Results from previous years before joining the scheme must be declared. For herds seeking CHeCS accreditation the veterinary surgeon must confirm that appropriate biosecurity and management measures have been implemented. Farmers will be sent a risk assessment questionnaire on enrolment, covering biosecurity and the management of animals, to help identify action points and to reduce the occurrence of new infections on infected premises.

■ **Farm boundaries** - It is important to prevent cattle from straying on or off the farm. Co-grazing with sheep, other ruminants and South American Camelids (SACs) should be prevented. Johne's disease also affects other ruminants such as sheep, deer, goats and SACs and there is the possibility of interspecies transmission.

■ **Cattle** - Clean udders if suckling takes place and remove calves as soon as possible after birth. Avoid faecal contamination of milk, if fed to calves. The grazing of youngstock on manure fertilised pasture should be avoided. Do not mix youngstock with adult stock until they are over 12 months old if possible and isolate any cows with possible Johne's disease for testing to establish disease status. Infected animals should be culled and their calves not kept as replacements. Cattle must not be grazed on pasture previously grazed by non-accredited cattle until a period of 1 year has elapsed. The same grazing restrictions apply to accredited cattle if slurry or manure collected from non-accredited cattle has been used on the pasture.

■ **Colostrum** - It is important that colostrum from non-Herdsure herds or herds of lower health status is not used on a Herdsure farm. Do not use pooled colostrum or waste milk for breeding calves. Ideally, feed only milk replacer or pasteurised milk to female and breeding male calves.

■ **Movements** - The movement of people, vehicles or equipment into areas where cattle are kept, including fields, buildings and other holding areas should be kept to a minimum. People entering the premises to handle cattle or their products should wear protective clothing and footwear. This must be clean and disinfected before and after contact with the cattle. Disposable protective clothing can be used as an alternative. Other visitors to the farm should be kept away from direct contact with cattle.

■ **Equipment** - Machinery, equipment, livestock trailers and handling facilities that are shared between Herdsure cattle and other livestock must be cleaned and disinfected before use. Other vehicles entering the farm should not come into contact with the areas used by cattle and they should be parked on clean hard standing away from the cattle. These vehicles must be visibly free of animal excreta and slurry, otherwise entry should be refused. Veterinary equipment must not be shared with cattle from another herd and veterinary surgical instruments must be sterilised before use in the herd.

■ **Delivery and pick up points** - These should be isolated from other cattle on the farm, and where possible, the driver should remain in the cab and should not assist in removing cattle from pens unless using farm-dedicated clothing and footwear.

■ **Feed, bedding and water** - When buying feed and bedding care must be taken to avoid the risk of introducing infection into the herd. Feed and bedding stores should be protected against access by vermin and wildlife. Maintain clean, dry housing for calving with adequate bedding. Enclosures should be disinfected between each calving. Piped mains water should be used rather than natural water sources if possible. It is preferable that if non-Herdsure cattle, sheep or SACs have access upstream or the water has passed through another farm, then the cattle should not have access to it.

CHeCS Accreditation



Herdsure provides the option of accredited disease free status for Johne's. Herds will be eligible to apply for CHeCS accreditation and awarded certificates of health status provided they achieve negative results with appropriate animals tested and comply with defined biosecurity rules.

A herd becomes accredited after three consecutive clear qualifying full herd tests, at 12 months apart, without any reactor being detected. Herds will be eligible for accreditation either following a full herd test after 12 months at Level 3 from Level 2a or upon entry at Level 3 from Level 2b. There are two CHeCS testing options to maintain accreditation. Please see Herdsure manual for further details.

Herdsure issues certificates of accredited health status and can issue individual animal sale cards if requested. For further information on CHeCS please visit www.checs.co.uk.