

Introduction

Leptospirosis is a disease in cattle caused by the bacteria *Leptospira hardjo*. It can cause reduction in milk yield, infertility, abortion and the birth of weak unviable calves. It is also an important zoonotic disease and infection in humans can result in severe flu-like symptoms. The major source of infection is infected carrier cattle, which intermittently excrete bacteria in their urine. Other less important possible sources of infection in a herd are contaminated water and infected sheep. It may be necessary to vaccinate a herd if a high level of infection is found.

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. All blood samples should be collected in red top blood tubes. Herdsure also supplies pots for bulk milk samples.

■ **Entry** - Herds with history and laboratory testing in the previous 12 months or vaccinated herds must enter at Level 2 otherwise herds enter at Level 1. Vaccinated herds cannot become CHeCS accredited.

■ Beef and dairy herds

Level 1 - Establishing health status

Testing at Level 1 aims to establish whether Leptospirosis is present in the herd or not. Milking cows, suckler cows, breeding bulls and replacement youngstock that are more than 12 months old are tested. For milking cows this can be done using a bulk milk sample. Blood samples from a proportion of suckler cows, cattle over 12 months old and all breeding bulls will also be collected. At the conclusion of Level 1 a decision is made whether to follow Level 2a (seronegative) or Level 2b (maintained immunity)

Level 2 - Improving health status through disease reduction strategies

Level 2a - Seronegative

For dairy and suckler herds: if all samples are tested negative at Level 1 they proceed to Level 2a which aims to establish an entirely serologically negative herd. The Level 2a route is required for CHeCS accreditation. All breeding animals aged one year or older must have blood samples tested. Serologically positive animals should be removed from the herd and further blood sampling performed at intervals of no less than 6 months and no more than 12 months until no sero-positives are detected. On completion of two consecutive clear tests the herd progresses to Level 3. The herd also qualifies for CHeCS accreditation on reaching this point.

Level 2b - Maintained immunity/seropositive

If any positive samples are found at Level 1 then the herd proceeds to Level 2b which aims to maintain and monitor the immunity of the herd. Potential disease incidents such as abortion, milk drop or infertility must be investigated. A bulk milk sample is tested every 3 months and where applicable statistical sampling of adult suckler cows are performed annually. The number of seropositive animals should decline and eventually a decision may be made to move to Level 2a.

Level 3 - Monitoring and maintaining health status

All episodes of possible Leptospirosis including abortion, milk drop or infertility should be investigated. For all herds, annual statistical sampling start one year after completion of Level 2. Each youngstock management group of 12 months or older intended for introduction into the milking or suckler herd are sampled. All breeding bulls are sampled individually. For dairy herds, sampling of quarterly bulk milk should begin 3 months after entry into level 3. For suckler cows, annual statistical sampling begins one year after completion of Level 2. The management groups are sampled separately.

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.

■ **Farm boundaries** - It is important to prevent cattle from straying on or off the farm, and to prevent neighbouring cattle straying onto the farm.

■ **Cattle** - Herds subscribed to Levels 2 and 3 of Herdsure for Leptospirosis must not come into contact with cattle from herds which are not of an equal or higher Herdsure status, otherwise they will lose their status. To re-introduce them to the herd, they must be regarded as added animals. It is strongly recommended that co-grazing with sheep, other domestic ruminants or camelids, is avoided. However this is not a mandatory requirement. Cattle must not be grazed on pasture previously grazed by non-accredited cattle until a period of 2 months 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. Where CHeCS accreditation is being sought there must be a 2 month interval before cattle follow sheep, or non-accredited cattle, onto pasture. Further details on added animals can be found in the Herdsure vet and farmer manual.

■ **Movements** - The movement of people, vehicles or equipment into areas where cattle are kept should be at a minimum. Persons entering premises to handle the 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 the cattle. Other vehicles entering the farm should not come into contact with areas used by cattle unless they have been thoroughly cleaned and disinfected.

■ **Equipment** - Shared equipment which is used on herds of unknown leptospirosis status must be cleaned and disinfected before use by herds subscribed to Levels 2 and 3 of Herdsure for Leptospirosis. Veterinary equipment must not be shared with cattle from another herd and veterinary surgical instruments must be sterile before use in the herd.

■ **Delivery and pick up points** - These should be at a site isolated from other cattle on the farm. Drivers should remain in their cabs and should not assist in removing cattle from pens unless using farm-dedicated protective clothing and footwear.

■ **Isolation facilities** - Isolation facilities that prevent contact with other stock must be provided for all added animals. A dedicated building separate from other cattle buildings is recommended. The drainage or dung storage area should not be shared with other cattle and dung should only be spread on land or added to the main dung store when all cattle in the isolation facility have passed the required health tests and have been added to the herd. Where cattle are confirmed as reactors, dung must not be disposed of onto pasture that is to be grazed by cattle within 12 months. All cattle entering the herd must be isolated for 4 weeks and appropriate testing carried out. It is only when both the isolation period and the required tests have been completed, with negative results, that these cattle can enter the herd.

■ **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. Piped mains water should be used rather than natural water sources whenever possible. Water sources which arise from neighbouring land could be contaminated by infected urine and therefore should not be used.

CHeCS Accreditation



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

Herds are eligible for CHeCS accreditation at Level 3 following 2 consecutive clear herd tests at Level 2a.

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