

Service Guidance

for the Herdsure® Cattle Health Improvement Service

Background to cattle health management

Farm health planning

Farm health planning is supported by Defra and is central to the delivery of the Animal Health and Welfare Strategy in England (2004). Defra has funded 27 projects in the beef and dairy sectors in England to promote the use of active farm health planning and has highlighted five challenges that had to be met for the selection and implementation of projects:

- Overcoming initial barriers to widespread adoption of farm health planning.
- Achieving higher standards of animal health and welfare.
- Contributing to a more profitable and sustainable cattle industry.
- Generating a support network to promote and advise on farm health planning.
- Promoting voluntary adoption of farm health planning techniques so they become an automatic part of livestock keeping.

‘Proactive’ cattle health management

‘Proactive’ cattle health management involves assessing the impact of disease on the farm and implementing a strategy to reduce the impact of that disease.

It involves a dynamic partnership between farmer, veterinary practitioner and relevant consultants (such as nutritionists, housing or milking plant consultants and consultants in the control of infectious disease). It is not simply about producing the documentation necessary for assurance schemes or audit trails. Cattle health management issues on farms may be diverse and wide ranging but they need not all be tackled at once.

Often the starting point will be clear. For example, a farm may be experiencing a high incidence of Johne’s disease, leading to deaths or an increase in the number of adult cattle culled. This may be recognised as the major cattle health issue on the farm without looking at the records.

For others, keeping records of infectious disease, mastitis, fertility, abortion, sudden deaths, traumatic injuries, lameness and production will be the key to the start of ‘health improvement planning’. Record keeping and identifying areas for improvement are important parts of ‘farmer-veterinary practitioner’ partnerships.

Quantifying the financial losses can be difficult, especially when the consequences are diverse and variable in different herds. Where the result is tangible, the financial impact to a farm business can be measured; for example, a reduction in the abortion rate in a dairy herd will produce a financial benefit. Other losses, e.g. those associated with the immunosuppressive effect on cattle exposed to BVD virus, are more difficult to quantify and are often overlooked. A study carried out for the Milk Development Council by the Scottish Agricultural College² concluded that ‘BVD is of great economic importance and highlights reproductive and immunosuppressive losses that are frequently ignored’.

² SAC Final Report for the Milk Development Council, *Estimating the Economic Losses associated with BVD infection in the UK Dairy Herd*, Nov. 2000.

AHVLA's approach to supporting cattle health management

Facilitating health management

For many commercial herds, attaining an accreditation of 'freedom from disease' is not necessarily the priority. Instead, the priority is control of disease and the reduction of its impact on animal health and welfare, as well as its impact on the economics of the farm. AHVLA, via the Herdsure® Cattle Health Improvement Service, aims to facilitate a partnership between the veterinary practitioner and the farmer to achieve this.

Use of the protocols

The testing and management protocols used in Herdsure® provide the veterinary practitioner with the tools to implement effective management of disease on farms.

Their implementation is very much in the hands of the veterinary practitioner; his or her partnership with the farmer client will ensure that all the appropriate procedures are successfully completed.

Each protocol provides a step-by-step guide to how to approach the control or eradication of a particular disease, providing scientifically robust and supported testing approaches coupled with advice on biosecurity and other herd management factors that need to be considered.

Descriptions of the levels of 'health status' within the protocols

Within the protocols there are three levels of health status. The current status of the herd and the date, and type of the next test due, will be included when reporting Herdsure® results.

In addition, an **annual herd progress report** will be issued to Herdsure® members. The progress report will detail the level achieved for each protocol for which the herd is enrolled on the date of issue. The report relates to the herd rather than to an individual animal.

For a small fee, an updated progress report can be produced. The updated progress report, like the annual report, will detail the level achieved for each protocol for which the herd is enrolled on the date of issue.

Level 1: Establishes the health status of the herd

Level 1 acknowledges that sufficient testing has been carried out in the herd, in accordance with the relevant disease protocol, to establish the disease status of the herd for that disease. It does not infer absence of disease or that an active programme to control or eradicate disease is in progress.

Where there is documented evidence of a particular disease currently in the herd, testing at Level 1 will be considered superfluous. In these cases herds will be advised to start the protocol at Level 2.

Level 2: Aims to improve the health status of the herd

Level 2 acknowledges implementation of a planned intervention that is aimed to improve the infectious disease status of the herd. This level is facilitated through the veterinary practitioner using the relevant disease protocol and the implementation of biosecurity measures and management actions.

This level recognises that, in some cases, it will be unrealistic to eliminate a particular infectious disease from the herd quickly; culling of a significant number of potentially infected animals over a short period of time may not be economically viable for the herd. However, the disease may be controlled by taking specific management actions, including vaccination in some instances. The success of that control can be monitored using the testing approaches described in the relevant disease protocol until the level of disease is sufficiently reduced to make its elimination a realistic goal.

In other cases, Level 1 results may indicate that a more proactive approach through the removal of a limited number of infected animals may be successful in quickly eliminating active disease.

Level 3: Monitors and aims to maintain the improved (or established as satisfactory at Level 1) health status of the herd

Herds will be able to move to Level 3 in two ways:

- Directly from Level 1, when the results of testing in the Level 1 protocol show no evidence of active disease.
- Via Level 2, when sampling and testing carried out at Level 2 has resulted in the removal of active disease.

An **annual herd progress report** will be issued to Herdsure® members. The progress report will detail the level achieved for each protocol for which the herd is enrolled on the date of issue.

The annual progress report will only remain valid until the next scheduled testing is complete. Where this testing is not conducted, no further progress reports will be issued and the holding will be deemed to have lost its status.

The importance of biosecurity to the success of cattle health improvement

Control of infectious disease cannot be achieved without addressing biosecurity on the farm. In recent years, the pressure on farms to maximise the economy of scale has resulted in a need to increase cattle numbers more rapidly than the breeding programme will allow. Furthermore, this effect is exacerbated by losses from culling as a result of disease. Faced with these realities, many units have been forced to abandon the 'closed herd' policy and 'buying in' replacement cattle has become a regular practice on the majority of farms.

Once a herd has embarked on a programme to eradicate a disease, or indeed has achieved eradication and wishes to remain disease-free, it is important that a number of biosecurity principles are adhered to. Disease-specific biosecurity principles are included in the relevant sections in this handbook and the protocols themselves include further information.

It is acknowledged that, for some herds, purchase of cattle will necessarily continue and, for this reason, the protocols for each disease identify the procedures and testing necessary to guard against introducing disease through 'bought-in' cattle.

Procedures for added animals

The risks involved in importing disease are highlighted in the relevant disease sections. The Herdsure® service recommends that all added animals are isolated and tested before joining the herd. Testing and isolation of added animals is mandatory for herds seeking CHeCS accreditation. The only exception to this is where animals are sourced from CHeCS disease-free certificated herds. Refer to the CHeCS technical document for the rules that apply as these may differ for the diseases covered.

Participating in the Herdsure® Cattle Health Improvement Service

Service instructions

Registering the veterinary practice

A simple registration process is in place for registering the veterinary practice onto the service, and it is most likely that this process will have been completed already if you have been issued with this handbook. However, Registration Form A in the 'Forms' section of this handbook is available to register a veterinary practice, should you need to do so.

This is a one-off process. There is no charge for a veterinary practice to register.

The forms included in the 'Forms' section may be photocopied, or you may request a copy by post or electronically by telephoning the Herdsure® helpline on 0300 303 1556. The forms may also be printed from the Herdsure® website at www.ahvlascientific.com. If posting completed forms, these should be sent to the Herdsure® address below:

AHVLA Herdsure® Cattle Health Improvement Service
Animal Health and Veterinary Laboratories Agency
PO Box 653, Newcastle upon Tyne, NE12 2ET

Receiving the registration pack

Upon receipt of completed registration forms for the practice, the following will become available:

- access to the handbook via the Herdsure® pages of the AHVLA Scientific website
- an information pack, which includes an information sheet about the service for you to give to your farmer client prior to enrolling the farm.

Enrolling farms

Registration Form B in the 'Forms' section of this handbook should be completed for each farm and then returned to the address given above. The information provided on this form will allow AHVLA to understand the type of livestock held on a farm, its location and which elements of the Herdsure® service would be of most benefit.

Each enrolled farm will receive a Herdsure® 'Handbook for Farmers', sent to your practice for distribution.

Herds participating in other health programmes may be eligible to join a Herdsure® health programme at Level 2 or 3. Requests for consideration of these cases should be made to a Herdsure® consultant, via the Herdsure® helpline, when an appropriate decision will be made based on veterinary criteria.

Some herds may be considering Cattle Health Certification Standards (CHeCS) accreditation; for enrolling these refer to the CHeCS section.

Farmer subscription

A subscription is payable by farms to enrol, renewed annually, and is based on the size

of herds (<200 and 200 and above) and the number of diseases for which they wish to sign up. Current prices may be viewed by visiting the Herdsure® pages at www.ahvlasscientific.com.

Definition of a registered herd

For the purposes of determining subscriptions, and also for herd management within protocols, a registered farm needs to be a single holding with a single County Parish Holding number (CPH). One registration covers all the animals registered on that holding, whether dairy or beef and whether managed within a single herd or multiple herds or groups. The selected protocol(s) for a disease (or number of diseases) will be applied to all the cattle kept under one holding number.

If a herd (that is cattle under one management system) is kept on two separate holdings with separate CPH numbers, both holdings should be registered at the same time. In order that cattle can continue to move between the two (or more) holdings, both holdings should follow the selected disease protocol(s) at the same time. Where two or more herds are under the same ownership but under different management systems and have different CPH numbers, they will need to be registered for Herdsure® separately and will be tracked separately through the disease protocols.

Definitions of cattle classes according to age and type

For the purpose of the Herdsure® service, the following definitions of cattle classes will apply.

Milking cow or dairy cow

An animal that has given birth to at least one calf and is used for the production of milk.

Beef cow, beef suckler cow or suckler cow

An animal that has given birth to at least one calf and is used to suckle the calf or other calves.

Breeding bull

An entire male animal which is over a year old and is, or is intended to be, used for breeding purposes.

Youngstock

All male and all female cattle (up to the birth of their first calf) from birth, regardless of breed or intended purpose. The only exception is breeding bulls over 1 year of age.

Sampling and testing³

Sample requests, pre-printed lists of ear tag numbers (see below), pre-printed sampling submission worksheets (see Appendix 1 for an example) and postage-paid Business Reply labels will be issued to correspond with testing regimes. 

Important: No samples should be submitted before receiving the first notification.

Submitting samples

Samples should be submitted according to the particular disease protocol and, in most cases, these will be requested by AHVLA (as identified by the symbol  in the protocols).

Specific sampling instructions are given in the protocols and in Appendix 3. In addition, sampling kits and detailed sampling instructions will be issued for collection of bulk milk samples. Where possible, these will be sent directly to the holding, allowing your farmer client to collect samples and submit them directly to the laboratory using the Business Reply labels supplied with the kit.  The farmer's veterinary practitioner will be notified if this happens.

Sampling requests that require veterinary input, such as blood collection, will be sent to the veterinary practitioner. These sampling requests will include information on what needs to be sampled and, where appropriate, will be accompanied by a pre-printed ear tag list (used to identify animals eligible for testing, based on age and breed).

In every case, the dedicated Herdsure® sampling submission forms, as shown in Appendix 1 and which differ from those issued by AHVLA for other purposes, should be used.

³ Tests are carried out under **AHVLA 'Standard Terms and Conditions for Supply of Services'**. These are available on request from your local AHVLA Regional Laboratory, from AHVLA Weybridge or on the AHVLA website at www.defra.gov.uk/ahvla. By submitting a sample to any AHVLA laboratory, customers are deemed to accept these arrangements. Customers will be notified if samples are unsuitable for testing.

No disease or disease-free status *per se* of any animal is conferred, nor should be implied, by any single test result. No value is conveyed, nor should be implied, to any animal(s) to which results relate. Maximum liability to the customer for loss or damage arising from an inaccurate report based on a single test is limited to £1,000. It should be borne in mind that all tests have intrinsic inaccuracies.

In circumstances where a test result may be used as part of an assessment of disease status, a number of repeated tests or test samplings is advisable to minimise the chance of conferring a misleading status to any animal. If any test result is used to establish the disease status of any animal(s), due consideration should be given to seeking independent insurance to cover any implied value or cost that this status or change of status may convey.

Statistical sampling

The Herdsure® protocols sometimes require statistically significant sampling of a subset of animals in each management group. This is done to ensure that the protocols are cost-effective for the farmer. The number of animals to be sampled is based on statistically valid sampling approaches that ensure 95% confidence in the results. Confidence is important in any disease control programme, especially if no positive animals are detected. If too few animals have been sampled and a negative herd result is obtained, a diseased herd could be wrongly classified as negative.

All Herdsure® protocols provide a 95% confidence that the disease is not present in the herd at a level that warrants intervention. The relevant detection level for each disease in each management group of animals was determined by AHVLA disease experts according to their experience and scientific knowledge of each disease. Test experts were consulted on the sensitivity of each test and, based on this information, the sample sizes were calculated by a veterinary epidemiologist for each level in each protocol.

Where statistical sampling is needed, the protocol includes a table that shows exactly how many animals in each separately managed youngstock group should be blood sampled to obtain 95% confidence that at least one sero-positive animal is detected.

How everything works

The supporting system

The service is supported by the in-house Herdsure® Management System (HMS). This is a specially developed IT system, used by AHVLA, which will manage customer records and monitor each farm to ensure that the protocols are followed in a systematic way. This means that veterinary practitioners will have very little record keeping to manage.

About 2 weeks before testing is due, the system will trigger the dispatch of 'sampling submission worksheets' (see example in Appendix 1).  These will be sent out with any appropriate consumables and will act as a reminder that the protocol requires specific testing to be carried out. Where appropriate (i.e. except for sampling from small numbers of cattle), these sampling worksheets will be accompanied by Cattle Tracing Scheme (CTS) ear tag lists (see Appendix 2) that identify the eligible cattle for each test, based on age and breed. Any added animals that qualify for testing but are not listed must be appended to the list, for example recently purchased animals. It should be noted that the ear tag lists provided in this way are for assistance only. The accuracy of this information depends on timely provision of herd movements, births and deaths to the British Cattle Movement Service (BCMS).

Identifying and recording cattle against sample numbers

It is important for the practice to use the sampling worksheets provided for sample/animal identification. This will not only assist the practice in selecting appropriate animals but allows AHVLA to print the ear tags in barcode format on the sampling forms against a space for vacutainer labels or other sample identifiers. As handwritten ear tags are not so easily handled at the data entry stage, AHVLA encourages use of its barcoded lists wherever possible to help ensure error-free data entry and subsequent reporting.

Additional testing of cattle from Herdsure® herds

Occasionally, veterinary practitioners responsible for subscribed herds may wish to take samples for testing *in addition to those specified in the Herdsure® protocols*. Guidance follows for two categories of samples.

1. Sampling for diagnostic purposes from cattle with clinical signs of disease in Herdsure®-subscribed herds

Investigation, sampling and testing for diagnostic purposes is not included within the Herdsure® service. Such samples should be sent to your local AHVLA laboratory, using the 'General Submission Form' (VLA3) available from the AHVLA website at www.defra.gov.uk/ahvla.

NB: In the event that disease is confirmed by this route, please **notify the Herdsure® helpline on 0300 303 1556 without delay**.

2. *Unscheduled (mostly unprompted but relevant to the protocol) sampling of cattle from Herdsure®-subscribed herds*

Additional sampling (non-triggered) may be required and can be managed and delivered within Herdsure®. Form C in the 'Forms' section of this handbook should be used, and is also available from the website at www.defra.gov.uk/ahvla. Tests requested in this way must be listed on this form and included in the Herdsure® protocol being subscribed to for the animal being tested. Samples under this category should be from animals showing no signs of clinical disease (see point 1 above).

The reason for submission must be identified by ticking the appropriate box on Form C and must fit into one of the following categories:

- testing of a bought-in animal or any animal returning to the farm following a visit to a show or sale or a period of hire (test according to protocol).
- testing of young and new-born calves in the BVD protocol
- retest of a BVD antigen positive animal to confirm persistent infection
- cattle (10-4 weeks before calving) or new calves (<14 days old) requiring a qualifying test in the Neospora protocol

Other categories of submission must be sent to your local AHVLA laboratory using the General Submission Form (VLA 3).

For unscheduled samples, the samples and the completed paperwork should be sent to:

AHVLA Herdsure® Cattle Health Improvement Service
Animal Health and Veterinary Laboratories Agency
PO Box 653, Newcastle upon Tyne, NE12 2ET

As most of the scenarios when you would submit unscheduled samples will not have been triggered by the service, postage-paid Business Reply labels will not have been issued. In this case, please add postage when returning samples. Alternatively, you may request labels for this purpose from the Herdsure® helpline on 0300 303 1556. Please note that postage-paid Business Reply labels should be used for Herdsure® samples only.

Reporting of Herdsure® test results

The results of tests will be returned to the submitting farmer's veterinary practitioner in a report signed by a responsible officer at the AHVLA laboratory, incorporating a standard text for interpretation of results.

At registration, it will be confirmed with the veterinary practitioner by which preferred method reports should be sent – electronically or paper.

If at any time a full history of a farm's test results is required, this may be requested by contacting the Herdsure® helpline on 0300 303 1556.

Telephone advice as part of the service

The testing regimes have been designed to use up-to-date testing technologies and to operate with minimum consultancy. Also, this handbook has been designed so that minimal additional advice should be needed. However, when required, additional advice is available to registered veterinary practices. It is most likely that the type of consultancy required will be specific to a herd/farm and closely related to the protocols.

You may contact AHVLA for veterinary advice relating to Herdsure®-enrolled farms by using the dedicated Herdsure® helpline on 0300 303 1556. The name of the practice, along with the CPH of the participating farm, should be quoted. In this way, the AHVLA veterinary consultant will be able to locate and view the records of the farm/herd concerned and be able to advise appropriately.

Bespoke consultancy

Bespoke consultancy for specific scenarios related to cattle health is also available for an additional cost that would be agreed between a farm/practice and AHVLA. An example of this would be an 'on-farm' consultation. Please make an initial enquiry to the Herdsure® helpline on 0300 303 1556 if you are interested in this service.

Invoicing for Herdsure® services

A monthly invoice for Herdsure® tests and annual subscriptions together with farmer identification for each will be issued to your practice. This is separate to the usual invoice received from AHVLA.