

Action Group on Johne's and the National Johne's Management Plan



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Johne's Disease

- Johne's disease is a chronic, progressive, incurable intestinal disease caused by infection with Mycobacterium avium subspecies paratuberculosis (MAP)
- While as few as 1-5% of cows in any year will show clinical signs of scour or wasting, more of the herd will be affected and suffer reduced output

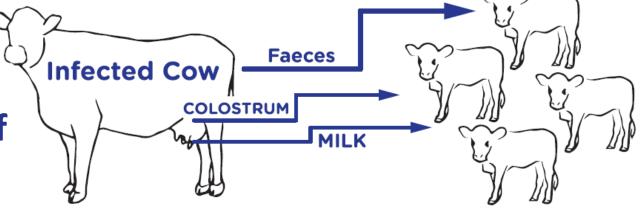


The Spread of Johne's Disease

- Johne's disease infection is mainly caused by calves ingesting faeces through contaminated bedding, udders, teats or on dirty buckets of colostrum or milk. Much less commonly the disease can be acquired in the womb or later in life
- MAP may last for a year in slurry or on pastures
- An infected cow can shed billions of MAP bacteria into the environment for years prior to showing any clinical signs

of the disease

 80% of Johne's infections occur within the first month of life





Johne's Disease Impacts Economic

- Johne's disease causes a severe economic impact on a dairy herd if the disease is allowed to spread within the herd
- Johne's disease will cause a reduced yield in affected animals, greater associations with other diseases, such as mastitis, lameness and high somatic cell count, and increased risk of premature culling. If the prevalence of Johne's rises further consequential losses occur as additional emergency cull rates lead to retention of cows with poorer economic performance and fertility potential

A study of 385 UK Dairy Herds by James Hanks of the University of Reading (2013) showed that Johne's test positive cows were 2x more likely to have a cell count >200,000 cells/ml and were 2x more likely to have milk yields 25% below their adjusted herd average. Johne's disease costs can rise to excess of 1-2p/litre with higher disease incidences and these costs remain for a number of years until the disease is brought under control



Johne's Disease Impacts Animal Welfare

 Johne's disease poses a major obstruction to achieving higher standards of animal welfare. Infected herds pose a risk to other herds through the sale of stock and herd dispersals



Johne's Disease Impacts Endemic Disease Control

- Tackling Johne's contributes to encouraging permanent behavioural change on farm in the management of endemic diseases through better biosecurity and improved hygiene and disease control practices.
- In particular tackling Johne's helps to reinforce the industry's efforts on BVD and TB. The principles for controlling Johne's are identical to that required by BVD Free:
 - Assessing the level of biosecurity and disease risk on farm
 - Defining the disease status of the herd
 - Action plan for control on farm
 - Monitoring progress
- UK Government are working with the industry to develop a plan to tackle endemic disease in the form of an Animal Health 'Pathway'



Johne's Disease Impacts International Competitiveness

- Significant efforts are being made around the world in most major milk producing countries to tackle Johne's disease and international experience has shown that if a rigorous control program is instituted and applied robustly Johne's disease can be brought under control
- If the UK dairy industry is to remain internationally competitive and able to demonstrate to customers in export markets that it is taking a responsible industry approach then it needs to proactively tackle the disease



Johne's Disease Impacts Antimicrobial Resistance

- The industry must contribute to efforts to reduce antimicrobial resistance
- Because of its association with other disease conditions (e.g. lameness and mastitis), Johne's disease is a contributor to antibiotic use on farms
- Reducing Johne's disease will assist in efforts to reduce antibiotic use on farms and address AMR



Johne's Disease Impacts Sustainability

- Farmers need to maintain production efficiency and technical performance to remain viable in a competitive environment
- Those that have already established effective Johne's disease management plans and demonstrated their success now consider Johne's management as a normal and necessary part of sustainable farming practice
- Tackling Johne's disease on farm makes a contribution to the industry achieving net zero by 2040



THE ACTION JOHNE'S INITIATIVE "THE NATIONAL JOHNE'S MANAGEMENT PLAN (NJMP)"



The Evolution of the Action Johne's Initiative

Apr-15 to Dec-17

- Phase 1
- Focus on education and engagement of milk purchasers, farmers and vets
- Vet training development & delivery



- Phase 2
- Farmers are now required to obtain annually a signed declaration by a BAJVA that they are meeting the requirements of the initiative

Overall objective of the initiative is the management and reduction of Johne's disease in the dairy herd of Great Britain



Aims

- In developing the initiative the Action Group on Johne's sought to:
 - Ensure that only properly trained vets are permitted to provide the signed declaration
 - Create and maintain a regular dialogue between vets and farmers
 - Include external verification in the implementation of the scheme
 - Provide commercial incentives for all parties to engage, through:
 - Purchaser commitment to requiring the involvement of their supplying farmers
 - Leaving the provision of veterinary advice to farmers on a commercial basis
 - Requiring vets to be trained before being able to verify farmer compliance
 - Demonstrating to farmers the commercial benefits of tackling the disease



Requirements of the National Johne's Management Plan (NJMP)

 There are three key steps the farmer should complete in conjunction with a BAJVA to satisfy the requirements of the NJMP:

Know your Johne's Disease <u>risks</u>

Carry out a structured risk assessment

Know your Johne's Disease status

Discuss with your herd vet, the best option for your farm: 30 cow screen, whole herd screen, clinical history or cull screen

Create a written
Johne's Disease
management plan

Create a bespoke management plan based on one of the NJMP six strategies



Step 1. Know The Disease Risks

- Farmers and their BAJVA need to know their risk status for Johne's disease to enable development of a robust plan to keep the disease out or, manage the infection if present
- An effective assessment of the risks of entry and spread in a herd should be carried out by a BAJVA as part of a farm visit, as it is important to get a good feel for what happens on the farm on a day to day basis in terms of biosecurity (to prevent disease entry) and biocontainment (to prevent disease spread)
- A structured risk assessment should be carried out and considered by the farmer and BAJVA annually, ideally at the time of NJMP consultation
- In respect of the use of risk assessment tools it is at the judgement of the BAJVA which tool is the most appropriate to use for an individual farm: BAJVAs should refer to the Veterinary Technical Manual for further guidance

1. Structured risk assessment to know the Johne's disease risks



2. Testing to establish your Johne's disease status



3. Create a writter Johne's disease management plar



Step 2. Testing to Know Disease Status

- Testing will help determine whether there is evidence of Johne's disease on farm or not
- Testing to establish herd status involves actively seeking out disease if it is there to give as much confidence as possible in assigning the herd status
- The more frequent the testing, the better understanding of Johne's disease on farm however as a minimum testing should be carried out and results considered by the farmer and BAJVA within the 12 months prior to the NJMP consultation taking place
- There are several testing options available to establish herd status, the appropriate testing method should be advised by the BAJVA
- Testing methods approved by the AGJ include:
 - Cull cow screening
 - Targeted 30 cow screen
 - Whole herd screen
- Unlike other diseases, bulk milk testing is **not sensitive enough** to detect infection at the early stage of infection therefore bulk milk testing is **NOT** approved by the AGJ

 Risk assessment to know your Johne's disease risks



2. Testing to establish Johne's disease status



3. Create a written Johne's disease management plan



Step 3. Create a Written Johne's Disease Management Plan

- There are six <u>control strategies</u> within the NJMP, one of the six strategies will suit every farm.
- The farmer and BAJVA should select the most appropriate strategy for the farm, taking into consideration farmer aspiration and the reality on farm
- The farmer and BAJVA should be realistic about what they would like to achieve and the timescale: Even when positive steps are fully implemented it can take 4-5 years to see significant progress
- Within the chosen strategy there will then be a list of tasks which will need to be undertaken to make that strategy work, these should be included by the BAJVA in a written Johne's disease management plan specific for the farm

1. Risk assessment to know your Johne's disease risks



2. Testing to establish your Johne's disease status



3. Create a written Johne's disease management plan



The Control Strategies

- 1. Biosecurity protect and monitor
- 2. Improved farm management
- 3. Improved farm management and strategic testing
- 4. Improved farm management, test and cull
- 5. Breed to terminal sire
- 6. Firebreak vaccination

Only ONE control strategy should be chosen and agreed between the farm and their BAJVA, and therefore included within the written Johne's disease management plan



Control Strategy Biosecurity protect and monitor

- This option is suitable for herds which have completed appropriate screening tests and have no evidence of disease
- A robust biosecurity protocol must be established to minimise the risk of bringing the disease in, this must address buying practice, slurry and grazing management
- Robust surveillance testing is required to monitor the herd status and detect incursions of disease, including regular veterinary monitoring. The level of surveillance required will depend on farmer aspiration and the risk of introducing Johne's disease into the herd
- It must be remembered that with minimal surveillance testing it may be possible to miss the arrival of the disease and allow it to gain a foothold within the herd before it is identified, especially if the herd has management strategies which would facilitate spread



Control Strategy Improved Farm Management

- This option is suitable for herds with low risk and low prevalence, who are able to commit labour resource to managing Johne's disease
- It relies on breaking the cycle of disease transmission from cow to calf through management changes implemented across all cows in the herd. These changes will concentrate on calving, colostrum and milk management
- No individual cow testing is undertaken and so all cows must be treated as if they
 are infected and a risk. The important thing to bear in mind with this strategy is
 that these changes MUST be implemented across EVERY cow in the herd
- Without excellent compliance this strategy will not work, and as there is no routine testing, there is no way of monitoring the disease. A level of herd surveillance testing should be considered, at least to establish a starting point and then periodically to be able to assess the effectiveness of the control programme



Control Strategy Improved Farm Management and Strategic Testing

- This option is suitable for herds with a higher prevalence
- This strategy uses strategic individual cow testing to identify those cows most at risk of spreading Johne's disease and implementing management changes to break the cycle of transmission for these cows only
- This allows the management changes to be targeted at those cows which
 pose the highest risk whilst allowing normal management of the remainder
 of the herd
- Testing should be carried out to identify high risk cows at a time appropriate to reduce the risk of transmission through management changes. It should be noted that the more frequent the testing, the more sensitive the results



Control Strategy Improved Farm Management, Test and Cull

- Suitable for low prevalence herds wanting to quickly remove infected animals from the herd BEFORE they get chance to spread Johne's disease
- An addition to the Improved farm management and strategic testing option with immediate culling of test positives rather than retaining and managing them.
- This option is not suitable for high prevalence herds as it may be uneconomic to pursue and alternative strategies may be more suitable in the first instance



Control Strategy Breed to Terminal Sire

- Suitable for herds with a high risk and high prevalence with no wish to breed their own replacements or the ability/resource to manage the risks through improved farm management
- No replacement animals are bred, all cows are served to a terminal beef sire and all
 offspring are fattened for slaughter
- Replacements are sourced from herds with lower levels of Johne's disease. In effect they become a 'flying herd'
- This strategy is not a way to remove Johne's disease and its effects from a farm. Cows will still develop Johne's disease and will need to be removed from the herd, hopefully this number will reduce over time as they are replaced with uninfected bought in cows
- It must also be remembered that on a farm with very high levels of Johne's disease transmission between adult animals is possible. It may still be prudent to undertake testing to help identify cows for removal
- ALL calves produced in this system MUST be slaughtered for beef and NOT enter the suckler herd as breeding animals



Control Strategy Firebreak Vaccination

- This strategy may be a short term option for high risk, high prevalence herds to "buy some time" until another strategy can be adopted
- A vaccination is available for Johne's disease, however its efficacy is limited. In the dairy herd calves will frequently become infected within the first 24 hours of life meaning that they are already infected by the time they are vaccinated. The vaccine does not prevent infection, nor will it prevent an infected cow from shedding the bacteria and infecting others. It does extend the period before an infected cow shows clinical signs thus giving that cow a longer productive period before she succumbs to Johne's disease.
- This option should not be undertaken without a clear exit strategy and a good understanding of the implications of vaccination. Once a herd is vaccinated it becomes very difficult to determine whether an animal is infected as the tests cannot differentiate between antibodies from vaccination and infection. This complicates the management of the disease.
- Vaccination must be undertaken under the advice and supervision of your vet.



The Declaration

- Once the <u>3 required steps</u> of the NJMP have been completed the farmer and BAJVA should both sign the NJMP declaration
- There are two declarations available and it is important that the correct one is signed:
 - 1. Declaration for farmers new to the initiative
 - 2. Declaration for farmers already participating in the initiative
- The declaration is a veterinary certificate endorsed by the Veterinary Defence Society (VDS), therefore the BAJVA is responsible to ensure that they and the farmer have complied with the <u>requirements</u> of the NJMP



Declaration Farmers New to the Initiative

- This Declaration is PURPLE and titled 'INITIAL Johne's Disease Assessment Declaration'
- A copy of this Declaration can be downloaded <u>here</u>
- Once completed and signed by both the farmer and BAJVA:
 - a copy should be held on farm with the written Johne's disease control plan – this will be required for the farm's Red Tractor assurance audit
 - a second copy should be returned to the farm's milk purchaser by 31st October (or otherwise specified by their milk purchaser) in the year in which the farmer joins the initiative (with exception of 2020 whereby the signed declaration should be obtained by 31st December 2020 (or otherwise specified by their milk purchaser)

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Declaration

Farmers Already Participating in the Initiative

- This Declaration is BLUE and titled 'Annual Johne's Disease Assessment RE-ASSESSMENT Declaration'
- A copy of this Declaration can be downloaded <u>here</u>
- The required steps of the NJMP and completion of this Declaration should be carried out annually
- Once completed and signed by both the farmer and BAJVA:
 - a copy should be held on farm with the written Johne's disease control plan – this will be required for the farm's Red Tractor assurance audit
 - a second copy should be returned to the farm's milk purchaser by 31st October (or otherwise specified by their milk purchaser) each year
 - (with exception of 2020 whereby the signed declaration should be obtained by 31st December 2020 (or otherwise specified by their milk purchaser)

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Action Group on Johne's (AGJ)

- The AGJ is an open forum for industry stakeholders, jointly funded by AHDB Dairy and milk purchaser members
- They developed the <u>Action Johne's Initiative "The National Johne's</u>
 <u>Management Plan (NJMP)"</u> to **control and reduce** the incidence of Johne's disease in the Great British dairy herd
- A full list of active members of the AGJ can be found <u>here</u>
- The AGJ endeavours to maintain the engagement of all relevant stakeholders in the development, implementation and evolution of the plan



Management of NJMP Delivery

- Secretariat support for the Action Group on Johne's (AGJ) is provided by Peter Dawson, Dairy UK
- RAFT Solutions is contracted to coordination the initiative; led by Harriet Scott:
 - 01765 645893 or harriet.scott@raftsolutions.co.uk
- The Management Group also includes Lyndon Edwards, OMSCo (Chair of the AGJ); Derek Armstrong, AHDB Dairy; Pete Orpin, MyHealthyHerd (Chair of the technical advisory group); Karen Bond, NMR





The Technical Advisory Group

- The provision of technical advice to the AGJ is undertaken by the Technical Advisory Group consisting of:
 - Pete Orpin (Chair); Derek Armstrong, AHDB Dairy; Dick Sibley, West Ridge Veterinary Practice; Elizabeth Berry, BCVA; George Gunn, SAC; Jonathan Statham, RAFT Solutions/Animal Health & Welfare Board England; Jules Dare, vet; Keith Cutler, vet; Natalie Jewell, APHA; Karen Bond, NMR; Andrew Bradley, QMMS; Steven Van Winden, RVC



Milk Purchaser Members

- Whether a new or existing member, the obligation on purchasers is to:
 - a. To provide information and encouragement for farmers to actively engage in Johne's Management through appropriate dialogue, engagement and support activities
 - b. Ensure all their supplying farmers comply with the <u>requirements</u> of the initiative. This is now a <u>mandatory</u> requirement of Red Tractor dairy standards
 - c. Provide the Delivery Team annually with information on the number of farmers obtaining veterinary declarations using a standard purchaser questionnaire developed by the Delivery Team



Collation of Declarations by Milk Purchasers

- Once a signed Declaration from associated farmers has been received, data should be collated anonymously by milk purchaser members within the template provided by the AGJ Delivery Team
- This template can be found on the <u>milk purchaser members portal</u>, log-in details can be obtained from <u>Harriet Scott</u>, <u>RAFT Solutions</u>
- Milk purchaser's should check that to the best of their knowledge the information provided on the Declaration satisfies the requirements of the NJMP (e.g. appropriate testing carried out within the previous 12 months, ONE control strategy, signed by a BAJVA)
 - BAJVA registration numbers should be provided and can be checked against the list available on the portal
 - Any problems should be raised appropriately with the farmer, vet/BAJVA or please contact Harriet Scott to discuss specific matters further
- The completed template should be sent to the Delivery Team within 14 days of the annual deadline each year



Milk Purchaser Portal





Veterinary Surgeons

- Only vets that have undergone and completed the <u>BCVA Johne's training</u>
 <u>programme</u> and its associated refresher training courses are permitted to sign
 declarations and therefore have obtained <u>BCVA Accredited Johne's Veterinary</u>
 Advisor (BAJVA) status
- By signing the declaration the BAJVA is providing veterinary certification that
 they and the farmer have complied with the requirements of the initiative. This
 is now a mandatory requirement of Red Tractor dairy standards
- Vets should make every endeavour to ensure that the consultation with the farmer takes place at the same time as the annual review of the farmer's herd health plan to ensure all other relevant disease control factors are taken into consideration and to minimise costs
 - Membership of CHeCS is recognised as providing equivalence to the requirements of the initiative



Farmers New to the Initiative

- For farmers joining the initiative the declaration confirms that the farmer has:
 - a. undertaken to assess their risks and herd status within the last 12 months and,
 - b. agreed to adopt the written Johne's management plan put in place in agreement with their BCVA Accredited Johne's Veterinary Advisor (BAJVA)
- Farmers joining the scheme have to obtain this signed declaration by the 31st October (or otherwise specified by their milk purchaser) in the year in which they join

(with exception of 2020 whereby the signed declaration should be obtained by 31st December 2020 (or otherwise specified by their milk purchaser) due to COVID-19 impact consideration by the AGJ)



Farmers

Already Participating in the Initiative

- For farmers who are in their second or subsequent years of participation, the annual declaration states that the farmer has:
 - a. undertaken to **re-assess** their risk and status within the last 12 months and reviewed their Johne's management plan with their BCVA Accredited Johne's Veterinary Advisor (BAJVA),
 - b. that the necessary management protocols, equipment, husbandry and resources are being implemented to adhere to this plan and,
 - c. agreed to adopt the written Johne's management plan put in place in agreement with their BAJVA
- This declaration has to be obtained on an **annual** basis by 31st October (or otherwise specified by their milk purchaser) each year (with exception of 2020 whereby the signed declaration should be obtained by 31st December 2020 (or otherwise specified by their milk purchaser) due to COVID-19)



Further information can be found on the Action Johne's website www.actionjohnesuk.org

Specific information for milk purchaser members and BAJVAs can be found within the relevant portals on the Action Johne's website

If you have any questions contact Harriet Scott, RAFT Solutions

