

First-hand experience of Action Johnes

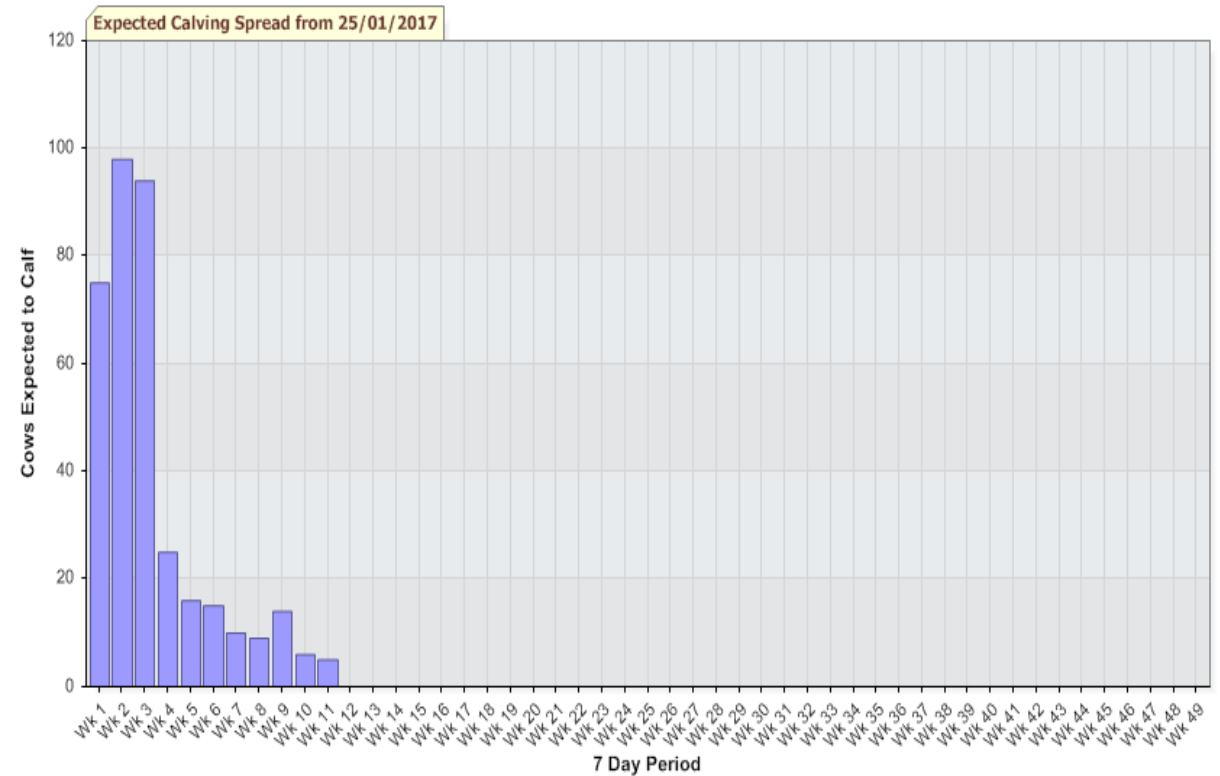


What we are going to cover

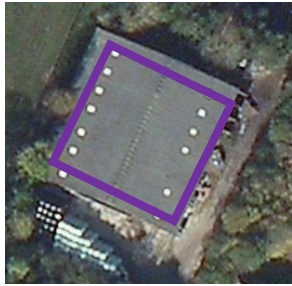
1. Farm background
2. Johnes history
3. Choosing a strategy
4. Progress so far
5. Why following a national Johnes's management plan is important
6. Future plans

Farm Background

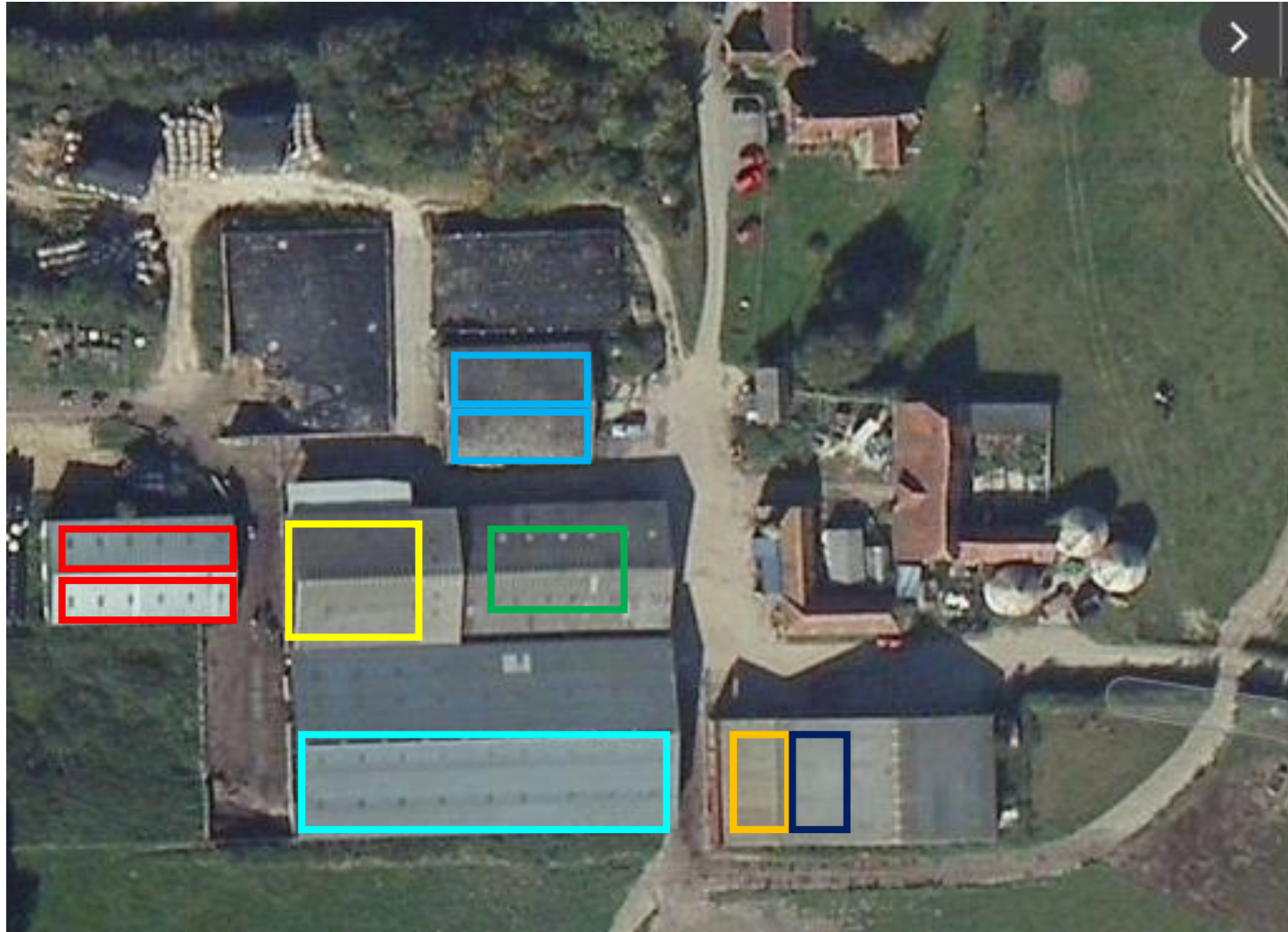
- 650 acre Dairy and Arable farm in West Sussex
- All Spring calving
- Mastitis rate 8%, 90% of herd dried off with no antibiotics
- The farm strongly believes in the benefits of producing milk from grass in relation to both overall animal health and welfare and business profitability and sustainability.
- Closed herd 30 years and has a strong belief that prevention is better than cure, remaining free of production diseases such as BVD and Lepto.
- In the future we would like to be milking 450 Spring calvers, with youngstock at home.



Farm Background - Accommodation



Off-site



Marshall's Farm

MAP/Johnes History – First Diagnosis

- No positives on suspect clinical case monitoring
- Historic bulk test negative
- 10th March 2014
 - 1st lactation animal (born 2012)
 - Clinical signs of Johnes disease
 - Culture positive after **16 days**
 - Significant exposure to this animal close to birth in 2012.....

REPORT 1 (FINAL)

LABORATORY FINDINGS

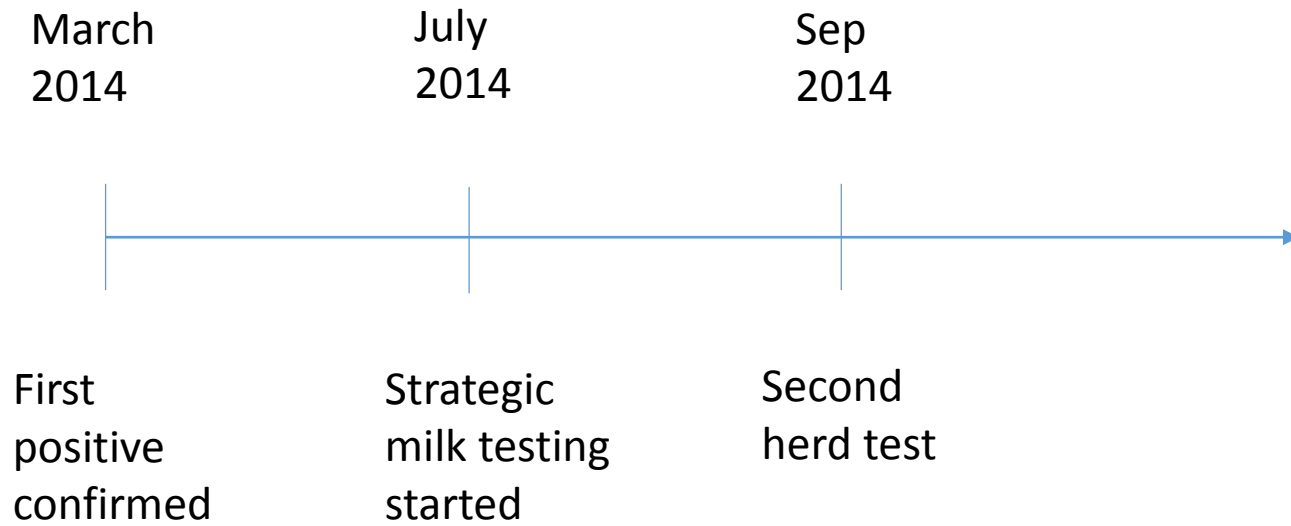
Serology

Sample	Johnes Ab ELISA (S/P%)
434 (CH0614267)	Positive ++++ (413.63%)

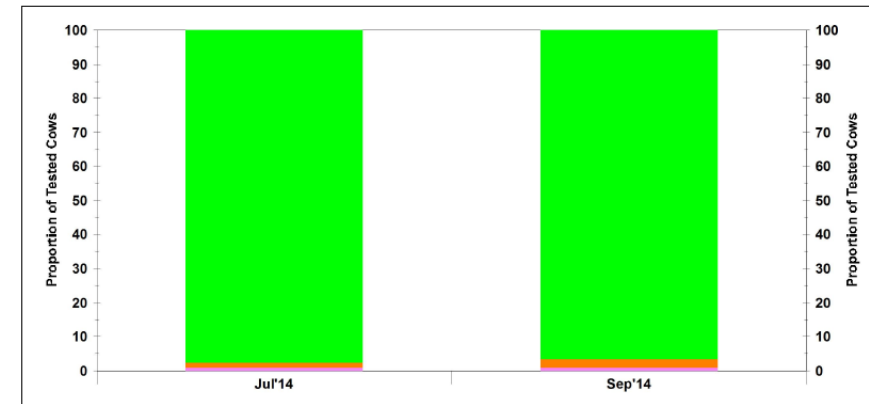
TESTING SUMMARY

<u>Determination</u>	<u>Result</u>
Serol. Johnes	Positive
Serol Johnes - Percent Positivity	250 %
Mycobacterium culture	sent 16
M. Avium paratuberculosis PCR	Positive

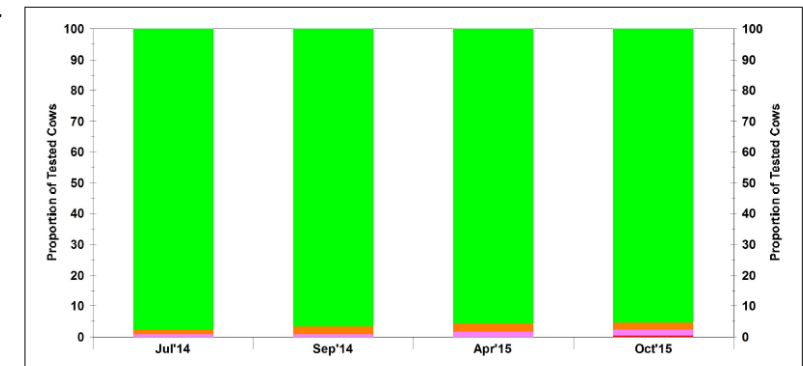
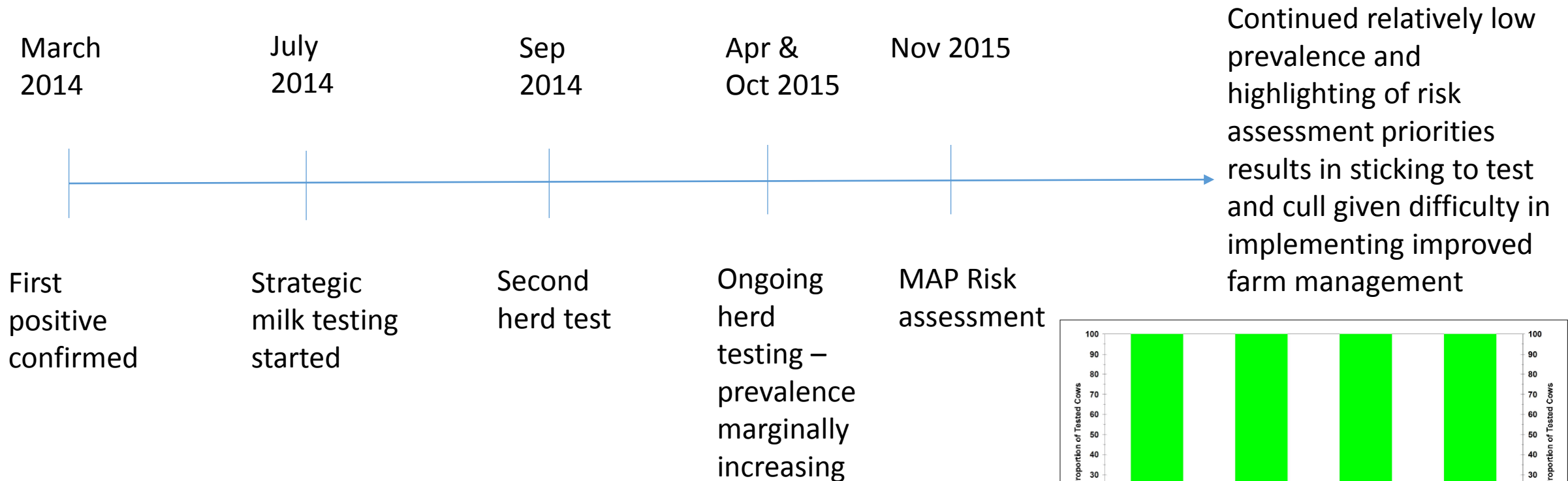
MAP/Johnes history - Timeline



Decision to cull positives prior to 2015 calving season as low prevalence and difficulty in changing farm management



MAP/Johnes history - Timeline



MAP/Johnes History: Conduct a risk assessment

1. Calving yard
 - High usage areas
 - Hard to have segregated yard
2. Pre-weaned calves
 - Pooled milk/colostrum feeding
- Harsh test and cull minimal management changes
- Pros
 - minimise exposure to young calves
 - Fewer management changes required
- Cons
 - Deficiency of identifying all high-risk animals
 - Positives slip through the net
 - Culling of 'good' animals

How to Do Risk Assessments and Develop Management Plans for Johnes Disease

(Fourth Edition, 2011)

A veterinary instructional handbook used for cattle herds in the Voluntary Bovine Johnes Disease Control Program to improve biosecurity and reduce pathogens.

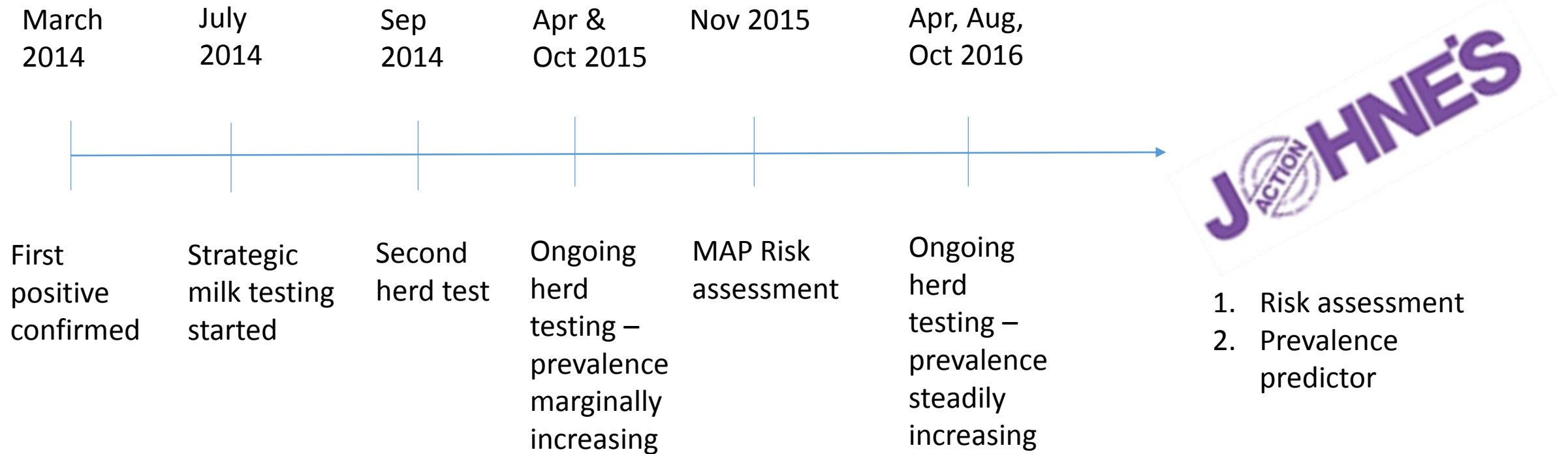
Descriptive Guidelines for Scoring Risk Factors for Dairy Herds

A. Calving Area - Dairy

Since calves are the most susceptible to infection, the score values are higher for risk factors in this area. Risk factors for the maternity or calving area should be assessed for the potential of a newborn to ingest manure or *Mycobacterium avium* subspecies *paratuberculosis* (MAP) from mature cattle. Considerations include ground and pen surfaces, contaminated udders and teats, suckling colostrum from an infected cow or manure contamination on calf's body surfaces.

Risk Factor	Calving Area Scoring Guidelines	Risk Level	Risk Score
1. Is the calving area used for more than one cow at a time?	No. Calving occurs in a single-use pen. Yes. There is a general maternity area with low cow concentration. Yes. There is a general maternity area with high cow concentration.	Lowest Moderate Highest	0-1 4-6 9-10
2. Is manure build-up in the maternity area a risk for calf ingestion?	No. The area is always clean and dry, with no manure visible. Yes. There is minimal manure visible. Yes. There is extensive manure contamination.	Lowest Moderate Highest	0-1 4-6 9-10
3. Are sick cows kept in, or adjacent to, the maternity area?	Never or very rarely. Yes. The hospital/sick pen is adjacent to the maternity area. Yes. Sick cows are often kept in the maternity area.	Lowest Moderate Highest	0-1 4-6 9-10
4. Are high-risk, clinical or suspect Johnes disease cows kept in the maternity area?	Never or very rarely. Yes, low-risk suspects may be kept near the maternity area. Yes, high-risk/clinical Johnes disease cases/suspects are kept in the maternity area.	Lowest Moderate Highest	0-1 4-6 9-10
5. Are the udders, legs and/or flanks of calving cows soiled with manure?	No. 90% or more of the cows are clipped, clean and dry. Yes. A moderate amount of manure is visible on 20%-40% of the cows. Yes. A majority of the cows have manure on udders, legs, flanks.	Lowest Moderate Highest	0-1 4-6 9-10
6. Are calves born outside of the designated maternity area?	Never or very rarely. Yes. Occurs 15%-25% of all calvings. Yes. Occurs more than 40% of the time.	Lowest Moderate Highest	0-1 4-6 9-10
7. How long do calves stay in the maternity area after birth?	Calves routinely stay in the maternity area less than 30 minutes. Most calves stay in the maternity area for 1 to 4 hours. Most calves stay in the maternity area for more than 6 hours.	Lowest Moderate Highest	0-1 4-6 9-10
8. Are calves able to nurse their dams or other cows?	Never or very rarely. Yes. Most calves are with their dam or other cows for 1 to 4 hours. Yes. Most calves are with their dam or other cows for more than 6 hours.	Lowest Moderate Highest	0-1 4-6 9-10

MAP/Johne's history - Timeline



Action Johnes

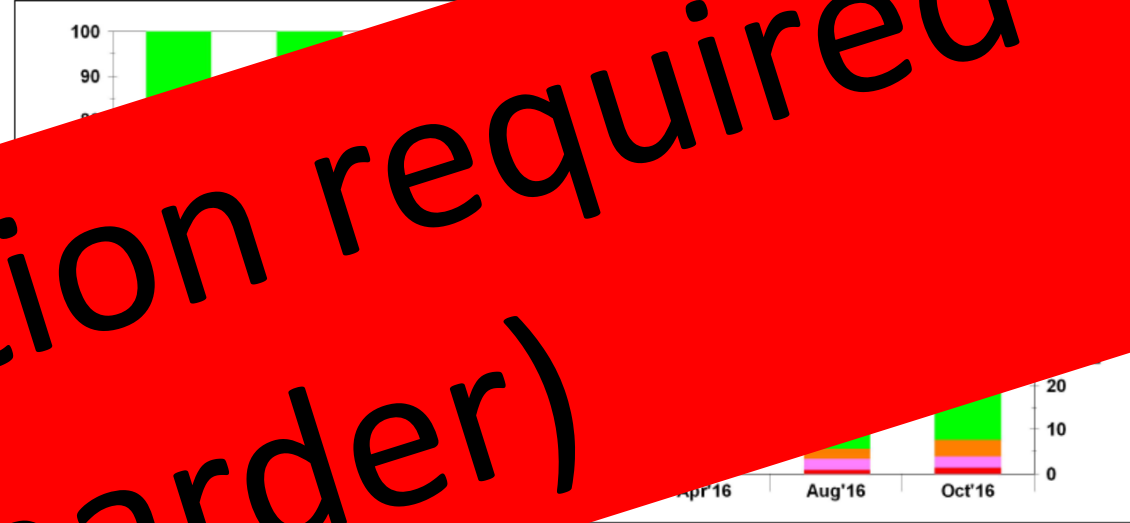


Marshalls Farm Herd
E O Lywood
Glasshouse Lane
Kirdford
Billingshurst
West Sussex
RH14 0LN

Quality Milk Management Services Ltd Johne's Herd Summary

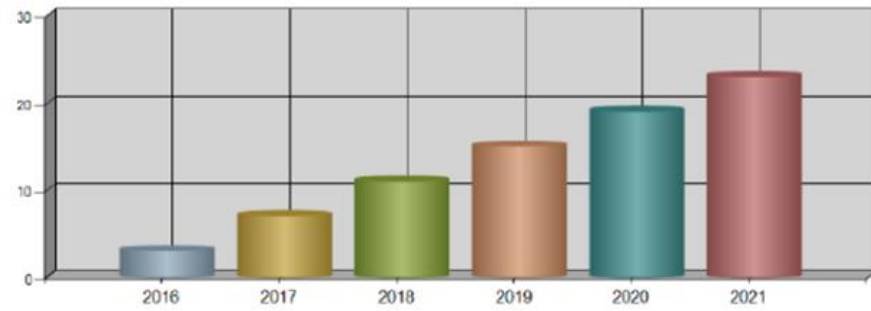
Bulk Value: No Sample
Bulk Result: No Sample
Test Date: 28/10/2016

Percentage of Tested Cows
Percentage of Tested Cows
Percentage of Tested Cows



QMMS Manager (v 9.9.002)
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On 10/11/2016 at 17:56:53



**Further action required
(must try harder)**

Attitude to tackling Johne's

- Infected animals never reach full potential
 - They struggle and often leave the herd early
- Dairies are asking to provide an increasing level of data regarding Johne's prevalence
 - Essential to take it seriously
 - The industry cannot afford bad press in relation to links between Johne's and Crohn's
- Economically with breeding our own replacements, we cannot afford poor or under achieving animals within the herd
- We pride ourselves hugely on having a healthy, fertile, long-life herd, Johne's does not fit this aim.

Refining the strategy – Improved Farm Management

- Any positive cows need to leave the farm asap
- Re-classify what is a 'HIGH-RISK' cow
 - Any untested animal (1st calvers)
 - Animals related to positives (but never tested positive themselves)
- All calves from high risk animals to be snatched and breed to beef
- Milk powder shall be used at calving 2017 for the first time once colostrum has been fed
- Cows will have to have had 6 clear tests (clear for 2 lactations) for them to be considered low risk enough to feed their milk to calves
- Thorough teat disinfection before calf milk harvesting
- Tail trimming, teat disinfection

Refining the strategy – Recent investments



What we have learned

- Inadequacy/lag of test and cull
- Can't cull out Johnes
- There could be a reason for 'under-achieving' cows
- In 2016 we lost 3 1st calvers
 - In 2014 calves were getting a good dose of MAP
 - This worried us **but when we think about it is NO SURPRISE**
- Johnes has been prevalent in related animals
 - Demonstrates how, if left, it can spread widely

Plans for the future

- Marshalls Farm is determined to achieve 'Johnes free' status.
- Improved farm infrastructure
 - New 250 cow cubicle shed at Marshalls
 - Options for segregation/reduced pressure on calving yards
- Pasteurisation of colostrum.....Discuss
- Potential testing of heifers.... Is it beneficial or best to treat whole group as 'high risk'?
- Must maintain excellent herd performance in other areas to enable culling for Johnes's