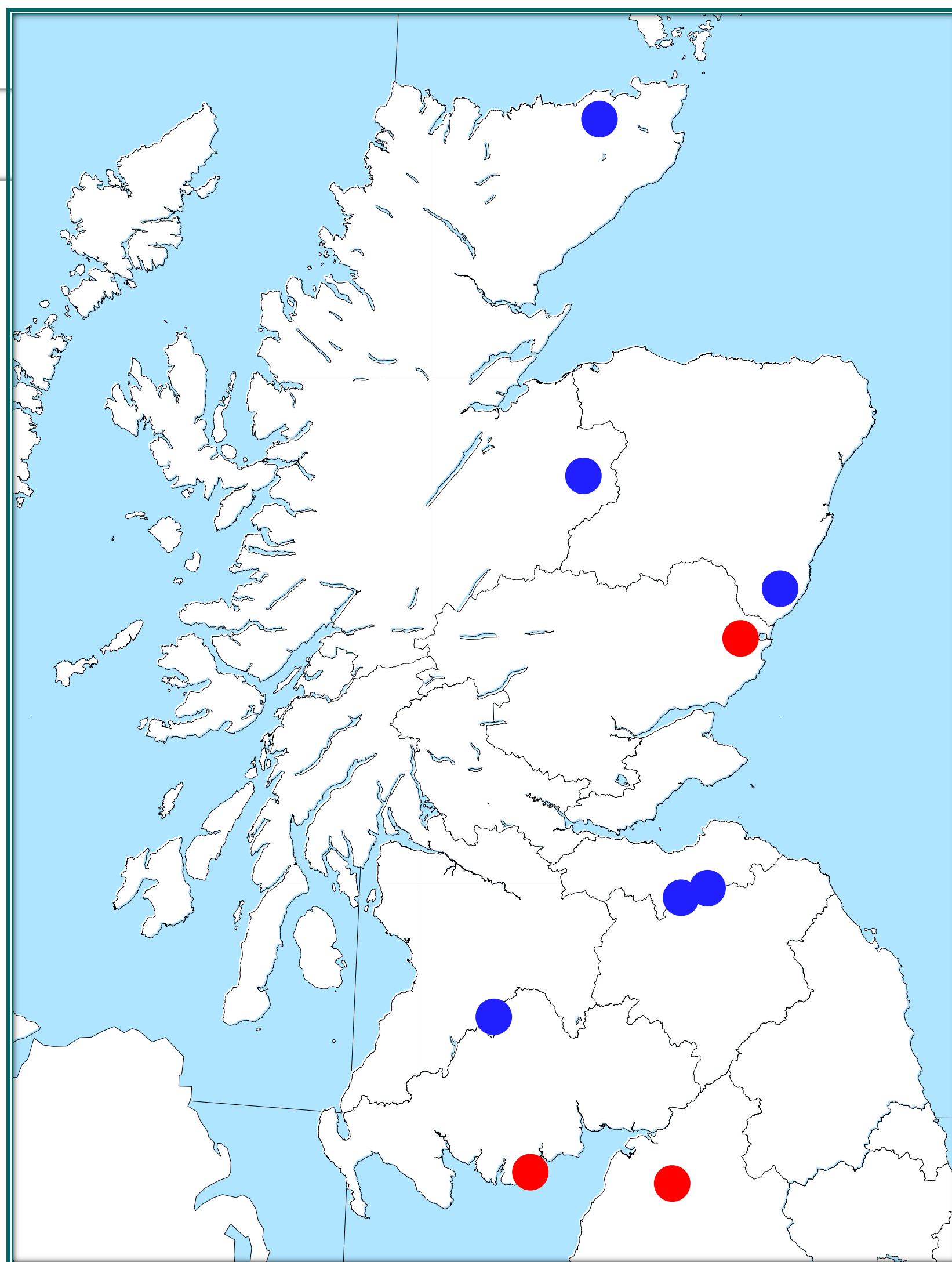


Slaughterhouse sampling as part of Johne's Disease control in Scotland

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Introduction



A multi-partner project focused on knowledge exchange about development and demonstration of 'best practice' for Johne's Disease control on 'Champion' farms (beef in blue, dairy in red).

The Glasgow component is focused on slaughterhouse testing of all adult animals from Champion farms

Methods

Farmers provide details of animals destined for to slaughter or which die on farm.



In the gut room relevant viscera can briefly be removed from the line.

The target area is the ileo-caeco-colic junction and this section of terminal ileum is taken along with the draining lymph node.



Intestines showing gross pathology attributed to MAP. If there is suspicious tissue in the viscera it will also be sampled.

- Samples are excised using scissors and placed in numbered containers for matching to the kill-line order and animal identification.
- Sections are trimmed and placed in 10% formalin for processing in the histology laboratory.

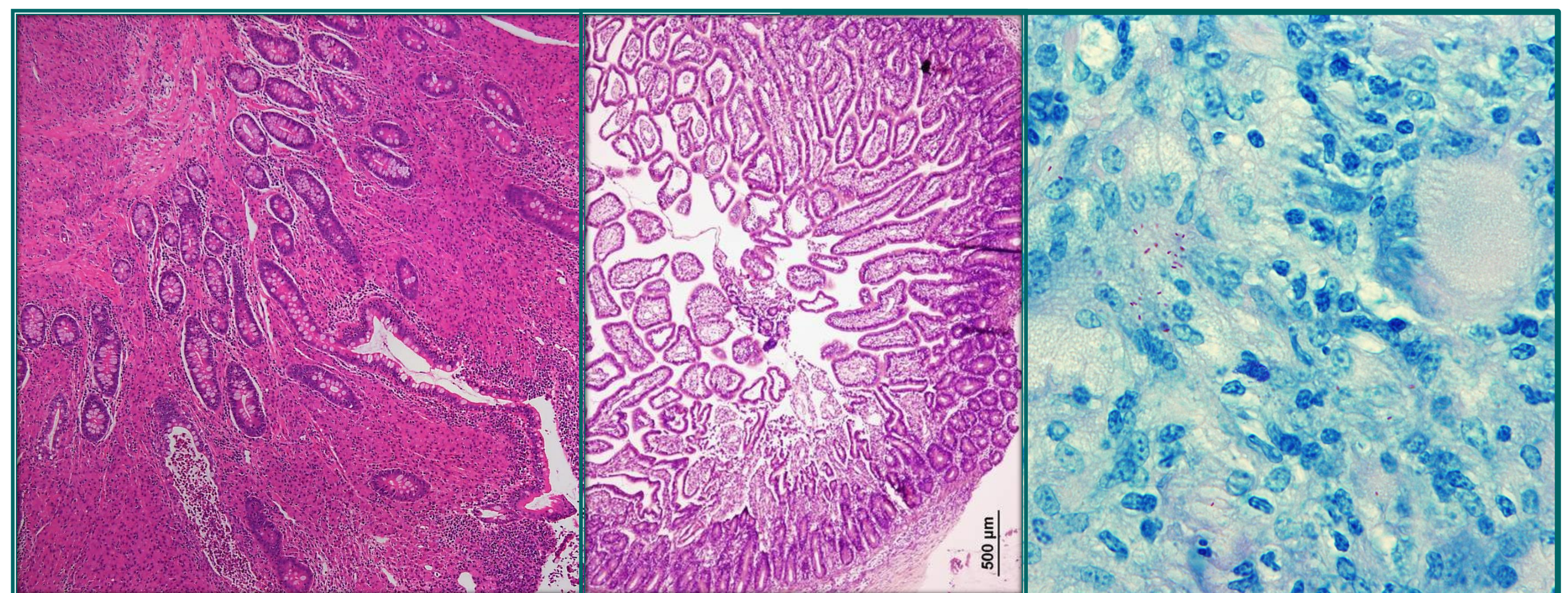
Results

Evidence for Johne's infection on histopathology

Evidence for Johne's on serum ELISA (reported) – farm test

	Positive	Suspicious	Negative	Total
Positive	2	2	13	17
Negative	1	5	61	67
Total	3	7	74	84

- So far, low numbers of tissue positive cases, even among ELISA positive animals
- More results from ELISA positive animals will allow proper method evaluation – as only a thin section of tissue is examined it is difficult to determine the probability of detecting MAP.
- Other techniques such as PCR and tissue culture may be used.
- This information will be used to inform decisions about the contribution of slaughterhouse testing to management plans on the PARABAN farms.



From left – MAP affected intestine, normal intestine and ZN stained MAP

- One slide is produced per animal and stained with Haematoxylin and Eosin (H&E) and also Ziehl-Neelsen (ZN) stains.
- A positive is defined as when pathological changes and bacteria are both present.
- If only granulomatous change suggestive of MAP infection is present, this is deemed suspicious.

Conclusion

Slaughterhouse sampling, complementary to testing in live animals, may be a useful means of monitoring the disease within herds. Close monitoring and implementation of bespoke disease management on three farms in the South West will provide greater insight into the value of this component. Farm open days are used to promote these control plans to the local farming and veterinary communities.

Acknowledgements

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