2nd Conference & Workshop Scanning Surveillance in Extensively Managed Livestock - Conference report

Newton Rigg College, Penrith

23 November 2017

November 2017

Contents

Executive summary

The aim of the Surveillance in Extensively Managed Livestock Conference, organised by APHA, was to bring together parties with existing or potential interest in the surveillance of disease and welfare threats in extensively managed cattle and sheep, to share information and insights, and further develop collaborative ways of working.

We invited a cross section of stakeholders from government, industry, veterinary practice, farming and academic sectors to attend to contribute to the ongoing development of the Centre of Expertise for extensively managed livestock (EML) at APHA Carmarthen Veterinary Investigation Centre (VIC). Whilst this Centre was an important part of 'Surveillance 2014'[1], it forms an important part of livestock health surveillance activities and expertise across Great Britain - and working in partnership is integral to future success.

In total, 50 delegates including farmers, academics, agricultural students, stakeholder organisations, government and vets attended the event on 23rd November 2017 at Newton Rigg Agricultural College, Penrith, Cumbria. The day comprised short presentations, followed by small group workshops with good networking and learning opportunities. We were pleased that all of the respondents felt the Conference met its aims and was useful (all delegate feedback rated as 'good' or 'excellent'). All respondents confirmed that they would like to be kept updated on further developments in this area.

The facilitated workshops were successful in collecting a large amount of anonymous information from the attending delegates for each of the four questions covered. All of the workshop responses were differentiated by professional background, and 34 to 49 distinct responses were given for each question. A key outcome is that for each of the questions posed during the workshop sessions it has been possible to identify two or three points that were consistently identified by delegates as of priority importance. However, no clear trend in responses by professional background was identified. For three of the four workshop questions additional questions and issues were raised (Appendix 1).

The conference and workshop clearly identified two key outcomes: (i) diseases of priority concern for extensively managed sheep and cattle; (ii) relevant channels and means of communication and engagement with keepers of extensively managed livestock. Crucially, the outputs of this conference and workshop will feed into the ongoing development of the Centre of Expertise and form the basis of project development in the future, as was the case following on from the first Conference[2].

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[1] Surveillance 2014: Changes to the delivery of Veterinary Scanning Surveillance in England & Wales, December 2013: http://webarchive.nationalarchives.gov.uk/20140708005003/http://www.defra.gov.uk/ahvla-en/files/surv-changes-delivery.pdf (accessed 20 March 2018)

[2] Surveillance in Extensively Managed Livestock Conference Report (November 2016): http://apha.defra.gov.uk/vet-gateway/surveillance/experts/exten-man-livestock.htm (accessed 20 March 2018)

Further development of health surveillance activities is anticipated through partnership and engagement of different individual groups and organisations involved. It is the intention that the Centre will continue to collaborate with individuals, organisations and professional bodies across Great Britain. As part of this the Centre of Expertise will continue to work closely with the Species Expert Groups[3] led by APHA, enabling the development of complementary, virtual hubs of expertise and information and networks of collaboration. In turn this contributes to the objectives and delivery of animal health scanning surveillance, including the timely detection, investigation and management of threats to animal health and welfare and public health, as well as providing information that can support farmers and vets in managing farm productivity and endemic diseases.

Priorities highlighted from the workshop sessions

Workshop 1: Communication & Engagement

A. What communication channels do keepers of EML currently use?

Peer groups (word of mouth), farming press, social media, the internet and discussion groups were the most common channels of communications used by EML keepers.

B. Who do keepers of EML seek information about animal health issues from?

Agricultural merchants, other farmers and vets were cited as the most common sources of information on animal health.

C. Other associations/groups allied to extensively managed livestock and their keepers.

Vets, agricultural merchants, other farmers and internet sites featured most commonly but a variety of other organisations were also given.

Workshop 2: Priorities & Challenges

A. What are the specific disease threats / risks for EML?

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[3] APHA Vet Gateway, Surveillance & Diagnostics - Species Expert Groups: http://apha.defra.gov.uk/vet-gateway/surveillance/seg/index.htm (accessed 20 March 2018)

The diseases caused by liver fluke, sheep scab mites and ticks featured most strongly in the list, but other issues such as climate change, Brexit, stewardship schemes and competition for upland use were also seen as threats.

B. What are the 'Top three' priority diseases of concern?

The top three priority diseases identified were:

- Liver Fluke

- Sheep Scab

- Tick-borne diseases

C. What are the specific challenges of identifying and managing diseases of EML?

The main concerns for farmers included:

- Ability to monitor stock regularly due to staff / time issues/ distance

- Recognising disease in large groups of animals

- Logistics of stock dispersed in remote areas

- Overcoming traditions

- Cash flow margin per unit livestock

- Veterinary costs reduces contact with vet

- Maintaining expertise

Conference programme

09.30	Arrival - registration and refreshments
10.30	Welcome Richard Irvine, Head of Scanning Surveillance, APHA
10.35	**Chair: Richard Irvine** Recap of 1st Conference findings Adrienne Mackintosh, Veterinary Investigation Officer, APHA Carmarthen
10.50	Mapping 'extensive' land use and types Adam Ashton, GIS Analyst, APHA Weybridge
11.05	Commoners & Common Land Viv Lewis, Foundation for Common Land & Cumbria Commoners Association
11.20	'The Farmer Network' Adam Day, The Farmer Network
11.35	**Coffee break**
11.50	**Chair: Amanda Carson, APHA** Sheep scab diagnostics Rebecca Mearns, Biobest
12.05	Sheep scab: developing resistance Sian Mitchell, Parasitology Lead, APHA Carmarthen
12.20	Liver fluke - environmental aspects Iain Richards, Veterinary Ecologist, Cumbria
12.35	Data, density and design Sue Tongue, SRUC
12.50	Q&A session
13.00	Lunch
PM	Workshop: small group sessions and feedback

Summary of conference presentations

Richard Irvine, Head of Scanning Surveillance at APHA welcomed all delegates, gave a brief introduction outlining the themes and objectives of the day, and thanked the organisers.

The first presentation was given by Adrienne Mackintosh, a Veterinary Investigation Officer (VIO) from APHA Carmarthen Veterinary Investigation Centre (VIC). Adrienne outlined the outcomes of the first EML Conference and workshops that had been held at the University of Bristol during 2016. One of the key workshop findings was to make better use of existing data and how summarising this data may benefit EML keepers. This had resulted in a project to identify, describe and make use of land use data held by government administrations in Great Britain (GB).

Adam Ashton from the Geographic Information System (GIS) team at APHA Weybridge then described the work done to map the different areas and types of land relevant to farming EML in GB. Maps were produced of 'common land' in England and Wales and Less Favoured Areas' in GB. It was recognised that the aim of compiling a list of livestock holdings that used these land areas was complicated due to the variety of and differences between existing datasets. However, more information has been gained about these datasets during the course of the project and this has enabled recommendations to be identified for subsequent approaches.

Viv Lewis of the Federation of Cumbrian Commoners and the Foundation of Common Land gave an overview of the history and diversity of common land within England and Wales. Viv then addressed the diseases of interest to her members, as well as the importance of good communication channels – and the advice that it was important to speak the farmers' language and to piggyback communications on existing channels where possible.

Adam Day spoke about The Farmer Network - run by farmers, for farmers - involving Cumbria and the Yorkshire Dales. He emphasised collaboration with and between farmers using partnership approaches, and the central role of farmer networks for communication. Adam then discussed the relevance, benefits and some potential limitations of systems for animal identification and traceability, and the importance for enabling trade and managing health and disease.

Three presentations were given that focused on specific diseases of interest to extensively managed cattle and sheep. The first two presentations were on sheep scab; the first by Rebecca Mearns of Biobest Laboratories described the use of the sheep scab ELISA blood test in diagnosis and control of the disease. The second presentation, by Sian Mitchell of APHA Carmarthen VIC detailed the emerging resistance of sheep scab mites to injectable treatments. This had been detected by APHA's scanning surveillance activities and a collaborative research project with the University of Bristol had confirmed the findings, with work ongoing to develop methods to determine sheep scab resistance.

Iain Richards, a local veterinarian from Cumbria followed with a third presentation on the environmental aspects of Liver fluke control and links with agri-environment schemes.

Sue Tongue, a veterinary epidemiologist from SRUC concluded the presentation session. In this Sue reiterated the fact that data is not necessarily information, and information is not necessarily knowledge. Sue gave examples of the use of data in livestock health monitoring and surveillance, and also underlined the fact that surveillance is the systematic monitoring linked with action, but warned of the risk of gathering of information without first clearly determining the questions that you want to be answered.

Workshop summary

Five groups were formed with equal representation from farmers, stakeholders, government and students, and each group was led by an APHA staff member.

The aims of this workshop were:

To capture means of communication and engagement with keepers of extensively managed livestock (principally sheep and cattle) on animal health and veterinary surveillance maters.

To identify diseases of concern in extensively managed livestock.

The following questions were posed to each group and responses captured through post-it notes and discussion.

Workshop 1 - How are keepers of EML best reached?

A. What communication channels do keepers of EML currently use?

B. Who do keepers of EML seek information about animal health issues from?

C. What other associations/groups allied to extensively managed livestock and their keepers?

Workshop 2 - Disease threats and health issues of importance to EML

A. What are the specific disease threats / risks for EML?

B. What are the 'Top three' priority diseases of concern for EML keepers?

C. What are the specific challenges of identifying and managing diseases of EML?

The responses for the questions posed are described below.

Workshop 1 - How are keepers of EML best reached?

A. What communication channels do keepers of EML currently use?

Peer groups (word of mouth), farming press, social media, the internet and discussion groups were the most common channels of communications.

Observations:

Discussion included consideration of what constitutes 'good information'. Information can be difficult to find and access, particularly as farmer gathering points have reduced – mainly attributed to markets closing. Quality information is important as the majority of

information is based on recommendations from other farmers. It is important to remember that the internet access in rural locations is still quite poor. Websites such as AHDB and NADIS provide information, but also allow farmers to sign up to receive emails with information pertinent to them but do all farmers utilise these resources?

B. Who do EML keepers seek information about animal health issues from?

Vets, agricultural merchants and other farmers were cited as the most common sources of information on animal health although farmers rated Agricultural merchants top, followed by other farmers and then vets.

Observations

Farmers recorded that they would benefit from being able to access 'a one stop shop' for information. It was commented that there is a lot of variation in farmers understanding of animal health issues. Local leadership through Government supported organisations, worked well in the past, but this seems to have reduced in many areas (former MAFF, ADAS). Menter a Busnes in Wales was cited as a current source, using local officers to work with farmers and provide information. Industry views government as regulatory. Some rural development programmes worked well, but often had no continuity and although they had had the potential to expand pilots into the mainstream this has not happened. Lack of engagement with vets is largely due to cost, although it was acknowledged that vets provide free advice over the phone. Vets are also associated with sick animals while agricultural merchants are associated with preventative practices. The industry views the Government agencies as one, with no differentiation between regulation and investigation (APHA is still not recognised clearly).

C. Other associations/groups allied to extensively managed livestock and their keepers.

Vets, Agricultural merchants, other farmers and the internet sites featured most commonly but a variety of other organisations were given.

Observations

There is a potential for fallen stock collectors to be a conduit for disseminating information as all farmers see fallen stock collectors.

Workshop 2 - Disease threats and health issues of importance to EML

A. What are the specific disease threats / risks for EML?

Liver fluke, Sheep scab and Tick-borne diseases featured most strongly, but other issues such as climate change, EU Exit, agri-environment/stewardship schemes and competition for upland use were also seen as threats.

Observations

There was a lot of concern expressed regarding the unknown fallout as a result of Brexit - change in trade, change in payments/subsidies/environmental schemes, *etc*. Endemic disease and parasites featured strongly, but discussion brought out other threats such as antimicrobial resistance, vector-borne (new and re-emerging) diseases, changes in management practices (such as increased off-wintering of livestock, bringing them into more intensively managed environments) and climate change. It was felt there was a lack of knowledge among some farmers on correct anthelminthic use and this was highlighted as a threat.

One group focused more on the socioeconomic and environmental changes and threats than on diseases.

To control disease on Commons rules are set by Commons Associations, but custom does not have the force of law. Commons Councils for Cumbria are being introduced so farmers can set their own standards to be agreed by the Common to underpin behaviours on the Common.

The issue of agri-environment and stewardship schemes was raised frequently, and it was considered there have been unintended consequences arising from requiring sheep to move to another environment, perhaps one they are less adapted to. Farmers thought this was due to a lack of understanding by scheme policymakers/designers ("*need to listen more to farmers*"). It was also stated that the uplands can also be subject to a very high degree of scrutiny from others, especially those with specific agendas.

It was also noted that a variety of people with outside interests (*eg.* to promote tourism, re-wilding proposals and flood management) have a view of how the uplands should be managed. When financial incentives are offered for these, farmers are likely to respond, but the result can be a change in how the land or animals are managed in a way that can increase disease risk. The point was made that the landscape of the Lake District and Dales developed over many hundreds of years, shaped by livestock management and use. Changes to the way the livestock are managed within the environment (or not) may change the landscape itself - "*Farmers can adapt to economic drivers (such as increasing tourism) but can the sheep*?"

There was much discussion on competing interests and specific agendas (including Government, tourist industry, and land owners such as the National Trust) driving how land is used. An example given was the Environment Agency (EA) banning sheep dips on pollution risk grounds, and of some dips being removed with the result that farmers no longer have access to this method of scab control.

B. What are the 'Top three' priority diseases of concern?

The top three priority diseases identified were:

- Liver Fluke

- Sheep Scab

- Tick-borne diseases

Observations:

The risk of introduction of other diseases including Bovine TB were also raised as were chronic (or iceberg) diseases. Trace element deficiencies, nutrition and metabolic profiles were also seen as important. There was a drive to reduce medicines use, but also concern about emerging lack of efficacy of treatments for parasites (worms and ectoparasites). Concerns were expressed on a perceived reduction in research and development for release of new drugs. Explicitly the outside pressures such as Government agencies/pressure groups/tourism business needs/environmental/welfare lobbies that are driving management changes, sometimes by enforcement and others by financial incentives.

C. What are the specific challenges of identifying & managing diseases of EML?

The main concerns for farmers included:

- Ability to monitor stock regularly due to staff / time issues/ distance

- Recognising disease in large groups of animals

- Logistics of stock dispersed in remote areas

- Overcoming traditions

- Cash flow margin per unit livestock

- Veterinary costs reduces contact with vet

- Maintaining expertise

Observations

There is a huge potential being missed on the provenance of EML, and marketing potential: free-range, low input, hefted flocks essentially closed because they breed their own replacements.

The breakdown of hefting system has implications for disease spread through movement of animals off hefts, and wider spread of livestock due to reduced number of sheep in hefts with potential to move ticks and introduction of disease from off wintered grazing on other holdings. Fewer sheep to act as 'tick mops'.

Unintended consequences of Agri environment schemes shows lack of understanding and join up between agencies EA / Natural England / RPA / APHA.

Potential for development of health plans for Commons.

More research on foot rot and genetics of resistance (*eg.* SRUC).

Providing feedback to farmers – Collection and Collation of Inspection Results (CCIR) data from the Food Standards Agency (FSA) is getting through, but many farmers uncertain where and how to follow this up. One farmer talked about *Cysticercus tenuicollis* and how to manage it.

Time that keepers have for stock management duties and that many families have at least one partner working off the farm.

Experience in farming this type of land. Fewer opportunities for the next generation coming through.

The drive towards altered land use and increased social/leisure use is reducing the collective 'farming knowledge'.

Biosecurity, especially with others having land access (e.g. tourists or visitors).

Wildlife and migratory wild birds having contact with livestock – particular concern about introduction of novel pathogens.

Exposure to vector-borne (and potentially new) disease.

Potential for exotic disease to come in and not be quickly observed.

Gene pool of many EML sheep flocks important to whole industry, but health status often unknown.

Need communications with EML keepers – keepers need to be willing & able to seek help?

Should producers monitor health status and share info with purchasers?

Appendix

This gives more detailed information gathered at the workshops. Post-it note comments collected during the sessions have been grouped where possible into the following responses:

Workshop 1 - How are keepers of EML best reached?

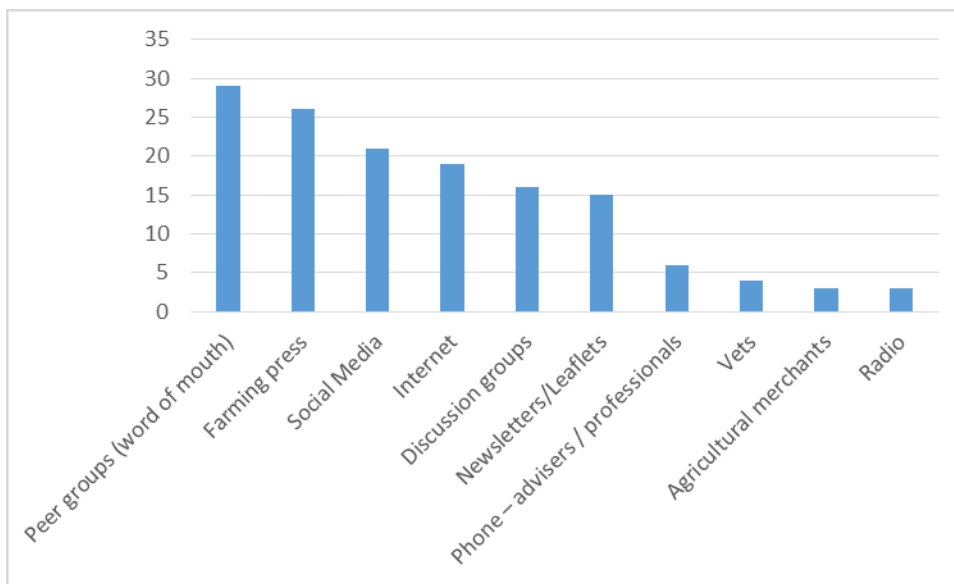**A. What communication channels do keepers of EML currently use?**

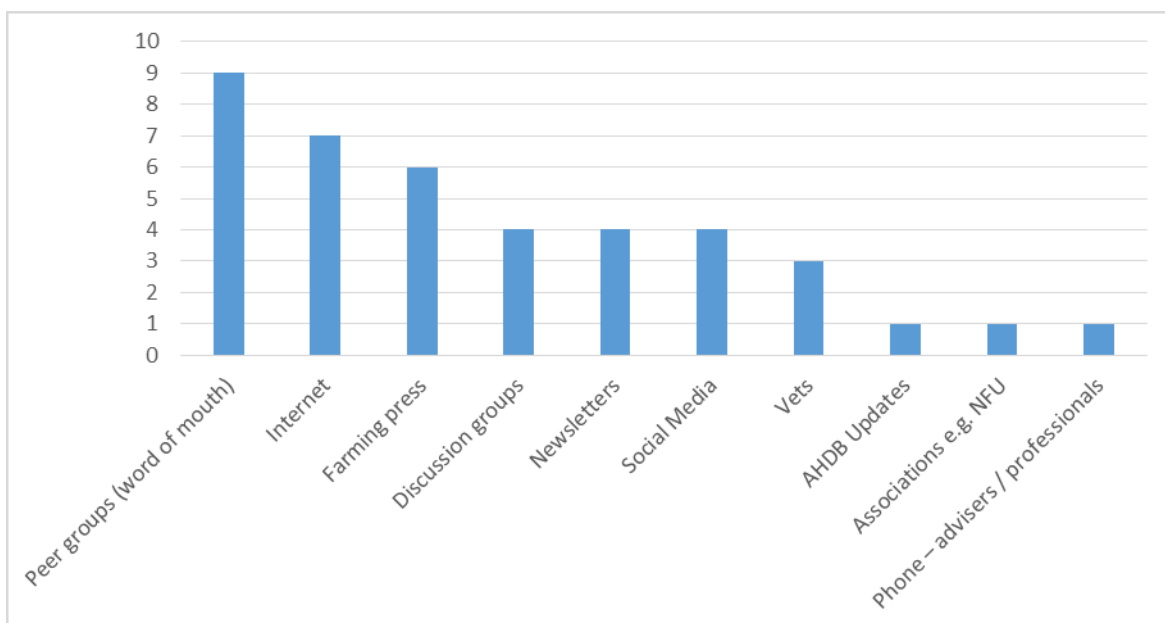Fig 1 Most common responses for all groups (155 responses)

Fig 2 Most common responses from farmers (43 responses)

B. Who do EML keepers seek information about animal health issues from?
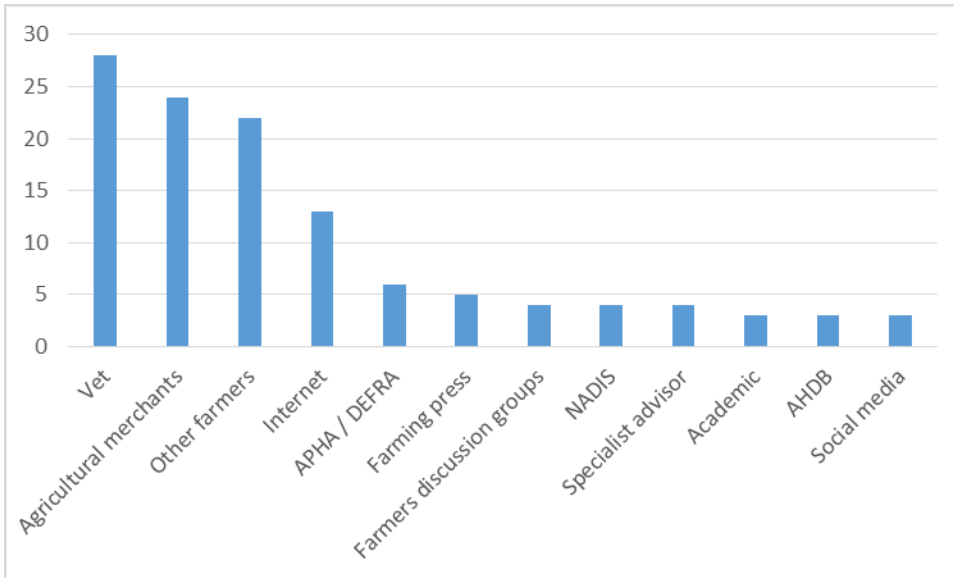
Fig 3 Most common responses for all groups (130 responses)
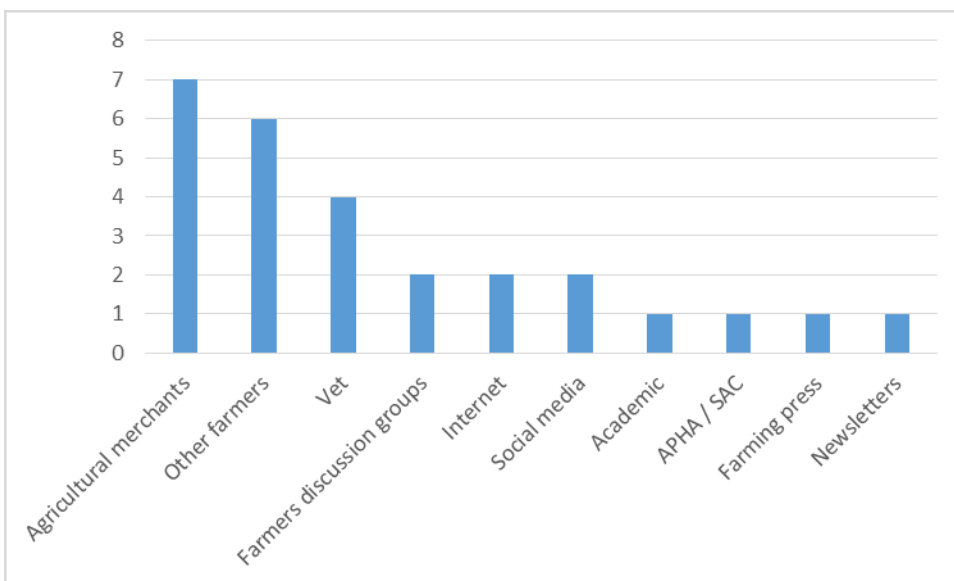
Fig 4 Most common responses from farmers (27 responses)

Other sources of information included: Markets, SAC, SCOPS, AFBI (NI), Land agents, Newsletters, NFU, QMS.

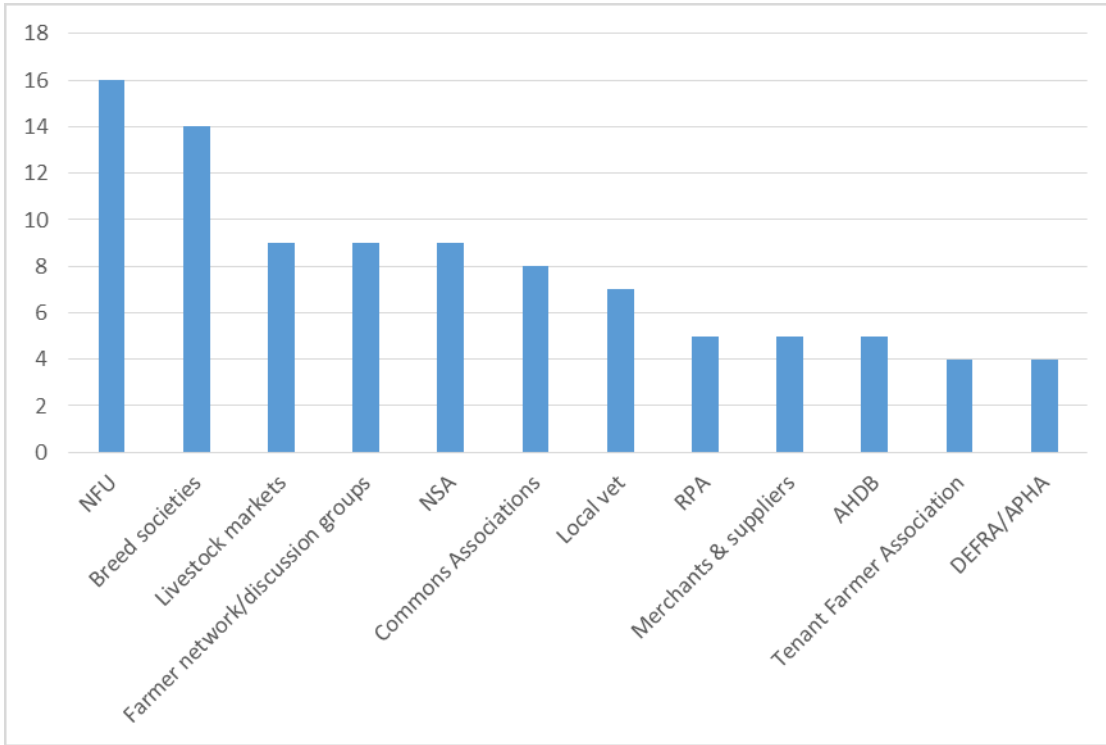## C. Other associations/groups allied to extensively managed livestock and their keepers.

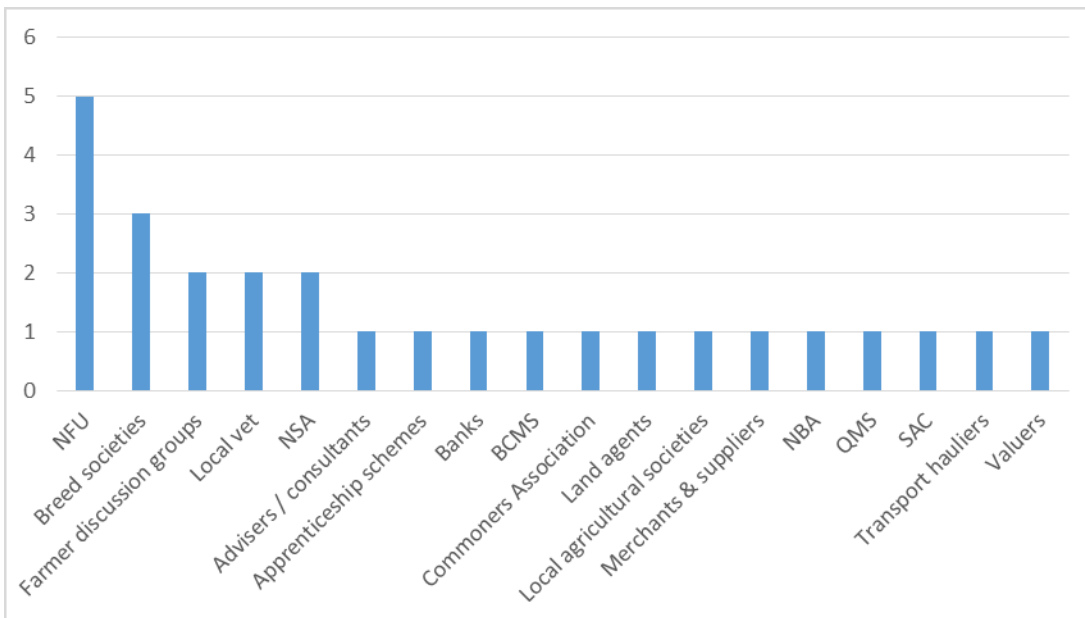
Fig 5 Most common responses for all groups (127 responses)

Fig 6 Most common responses from farmers (27 responses)

Other responses:

SRUC
Natural England
Moredun
Local agricultural societies
Crofting Commission
CLA
Trade associations
Sector Councils
SCOPS
QMS
NBA

Machinery rings
Grassland Society
Farm assurance bodies
Fallen stock
Colleges / Universities
BCMS
Bank
ARAMS
AHWNI
Agricultural advisers / consultants

Workshop 2 - Disease threats and health issues of importance to EML

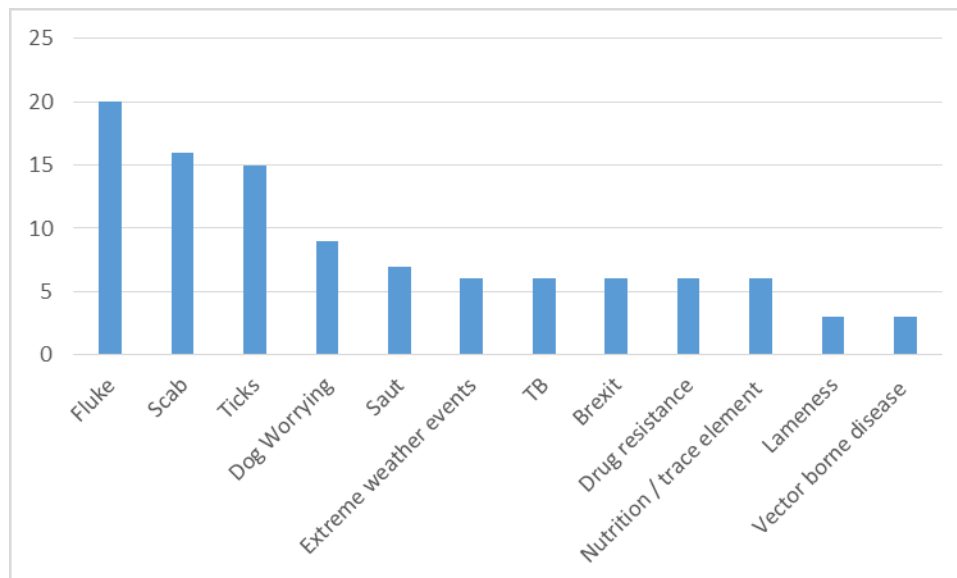## A. What are the specific disease threats / risks for EML?

Fig 7 Most common responses for all groups (161 responses)

Other issues identified:

Access to services
BVD
Changing biodiversity
Endemic Diseases
Johnes disease
OPA
Predation
Subsidy
Exotic disease
New diseases
PGE
Access
Biosecurity
Black loss
BTV
Chronic disease
Climate change
Clostridial diseases
Cost of treatments
Cysticercus tenuicollis
Difficulties treating diseases
Fly strike
Fly tipping
Environmental activists
Hobby farmers
Lameness (CODD)
Lice

Listeriosis
Loss of the culture – pressure to stop communing due to diseases – threatens farming
Louping Ill
Lumpy skin disease
Metabolic diseases
Mixing groups
Nutrition
Poaching
Pox diseases
Production Limiting Diseases
Reduced stocking rates
Rewilding
Soil borne – if exposed grazing / soil e.g. Listeria
Succession planning
Traffic
Treating all animals in extensive area
Water borne diseases – e.g. Leptospirosis Salmonella from upstream
Wind borne disease e.g. FMDV
Worry about what fellow commoners / neighbours think of you – reluctance to admit / share that you have disease
Zoonotic diseases

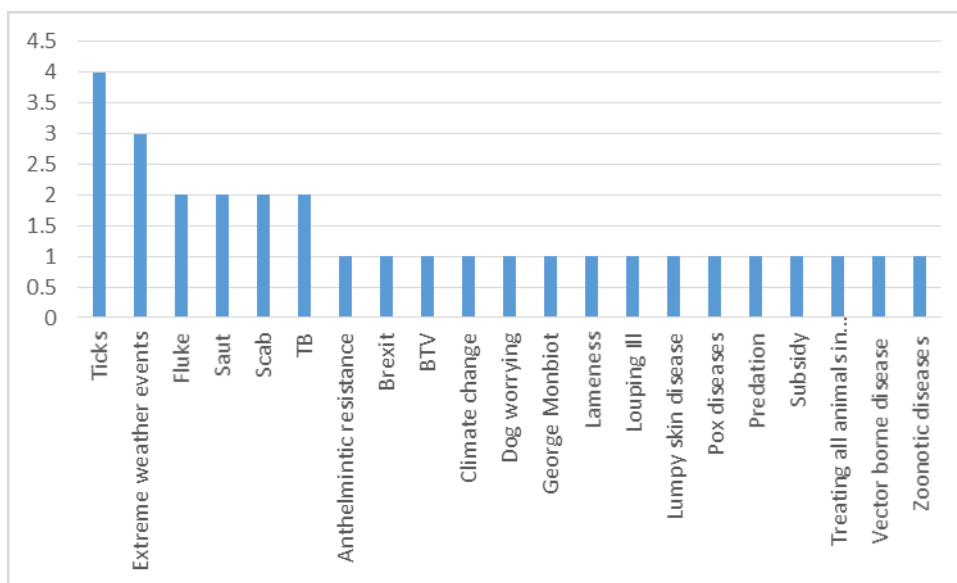## A. What are the specific disease threats / risks for EML (continued)?

Fig 8 Most common responses from farmers (30 responses)

B. What are the 'Top three' priority diseases

- Liver Fluke
- Sheep Scab
- Tick-borne diseases

Other issues were also identified, namely: Drug resistance, Climate change, Government policies (farming & agri-environment).

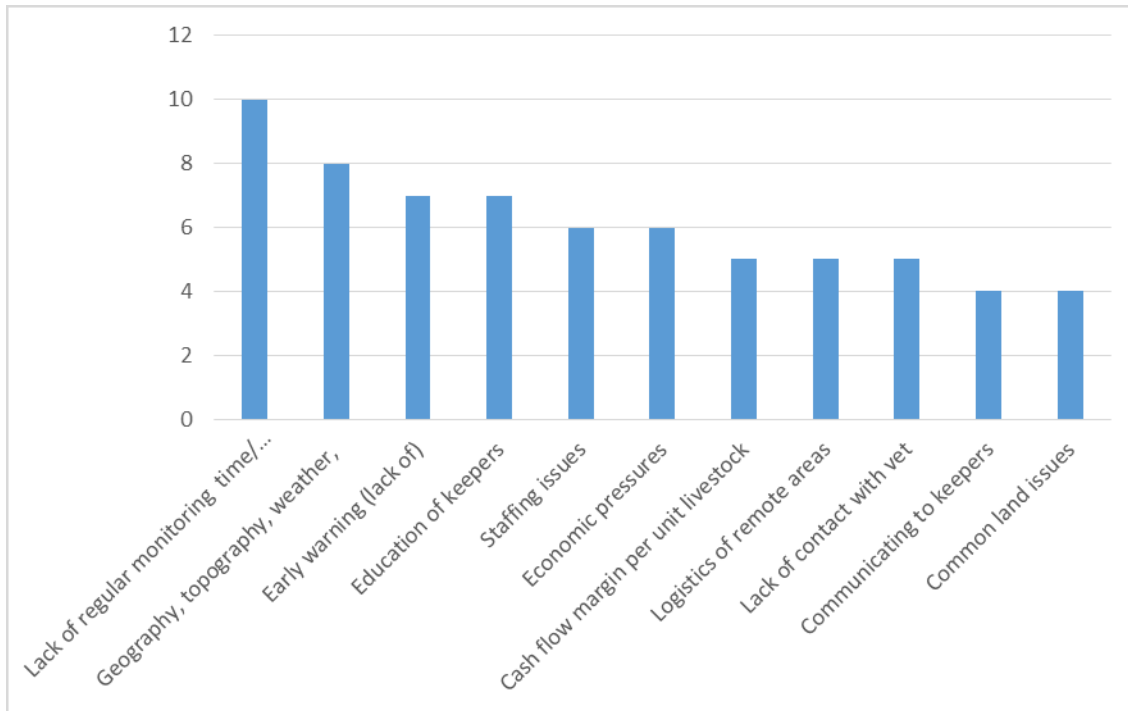## C. What are the specific challenges of identifying and managing diseases of EML?

Fig 9 Most common responses from all groups (100 responses)

Other issues identified:

Ageing workforce
Drug resistance and lack of new technology for new treatments
Variation in ability to access post-mortem examination (PME) providers/services
Breakdown of hefting systems on commons
Burying head in the sand - fear of 'the stick'
Changing management systems
Difficult for younger farmers to access land and government support
Expertise
Extensive stocking (commons) less illness prone
Fear of other peers' & neighbours' opinions of you as a farmer
Iceberg diseases – difficult to understand
Knowing what baseline of disease prevalence is
Lack of good quality broadband
Lack of infrastructure on EML holdings
Lack of knowledgeable vets
Lack of location data held centrally
Lack of technology - EID in cattle
Missing (dead) stock not available for autopsy
Overcoming tradition
Perception of costs related to diagnosis
Perception of official bodies
Period of time between gatherings – may not be optimum time for treatments
Reduced number of available drugs
Spotting and managing new / exotic disease threats
UK/GB surveillance infrastructure is required – disease does not recognise borders.