

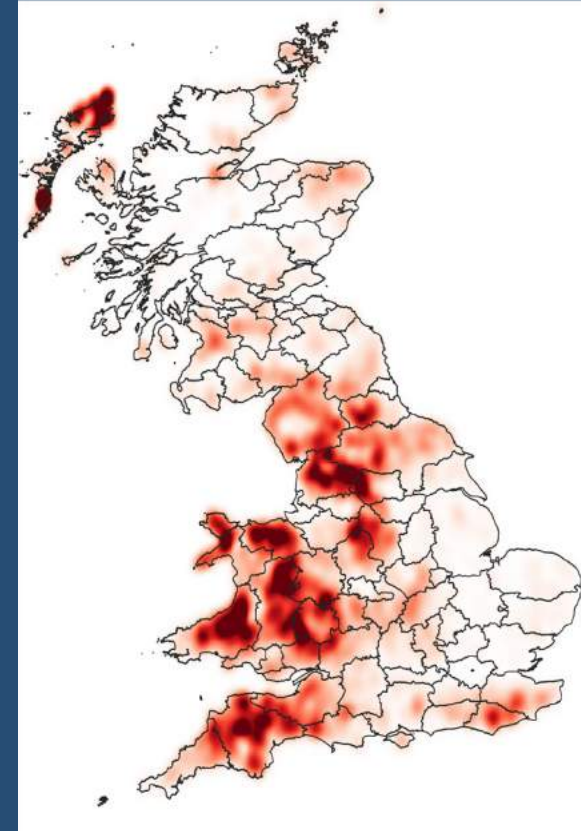


# RDPE – sheep scab control programme – England

Stew Burgess – Moredun Research Institute

# Where are we now with sheep scab?

- **Brief history:** Eradicated (1952), re-introduced (1972), de-regulated (1992)
- Endemic, 10-15% of farmer experience scab, 8-10k outbreaks/year, costing ~£80-200 million/year
- **Challenges to control:**
  - Over-reliance on MLs and OP dips, no new drugs
  - Routine whole flock treatment – costly/ineffective
  - Non-validated means of control (e.g. showers/jetters)
  - Scab focussed in clusters/hotspots - key control points
  - Coordinated control is crucial – status quo is not working!
- **Continuing threat of ML resistance** - reported from 2018 clear evidence of spread across UK



# Moredun - sheep scab test

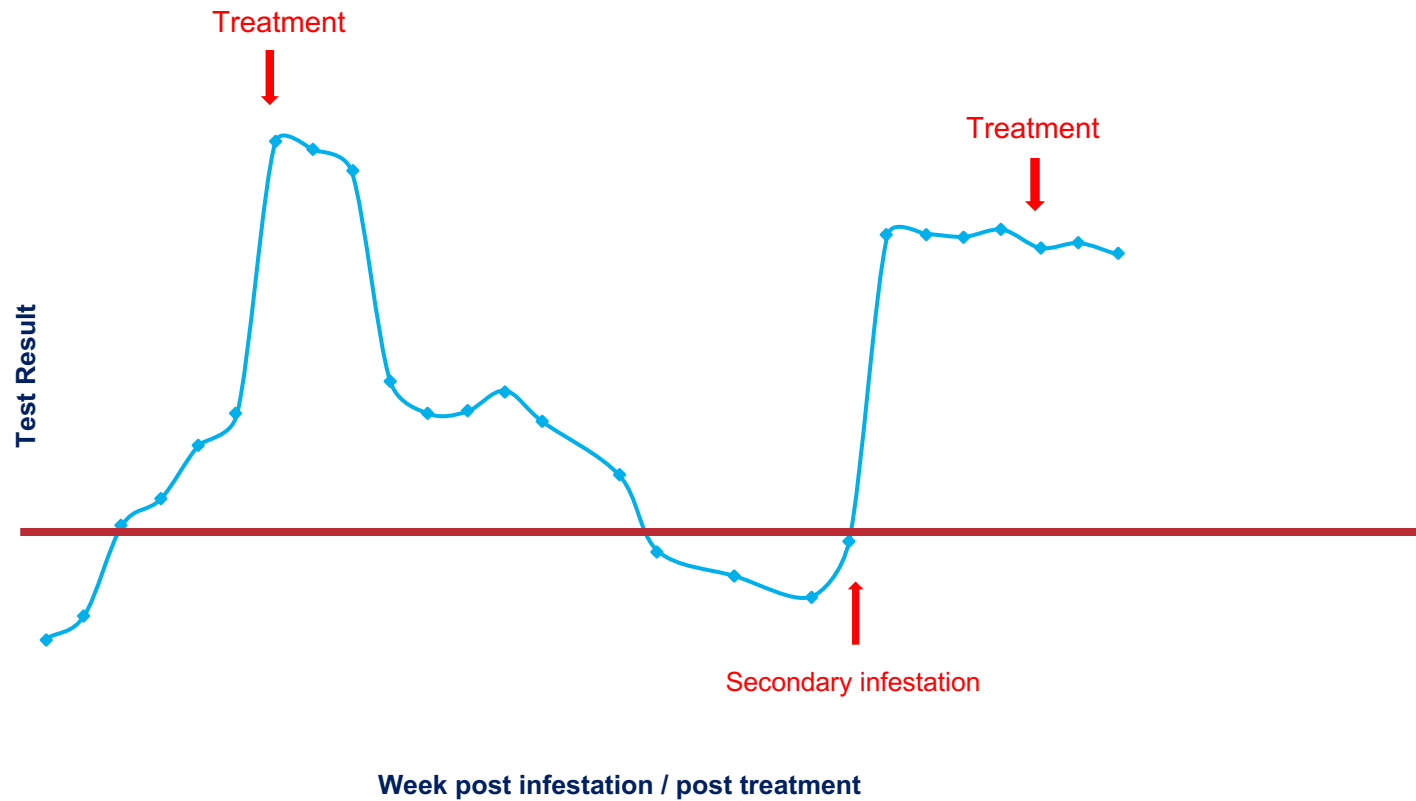
- Can detect scab within 2 weeks of an infestation and before clinical signs appear
  - Recommended for all sheep (individual or group) test
  - Need to test
  - Crucial tool for
- available since 2017



Gam  
before

d scab  
nity to get  
ahead of the curve

# How does the test work?

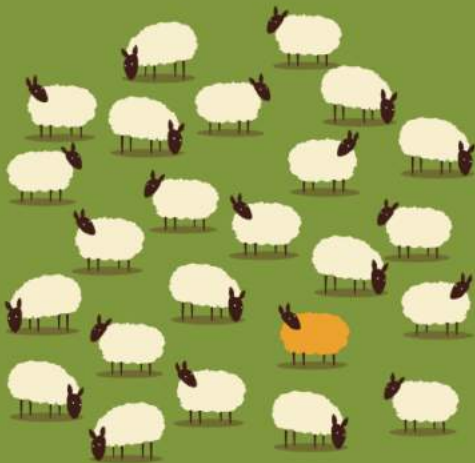




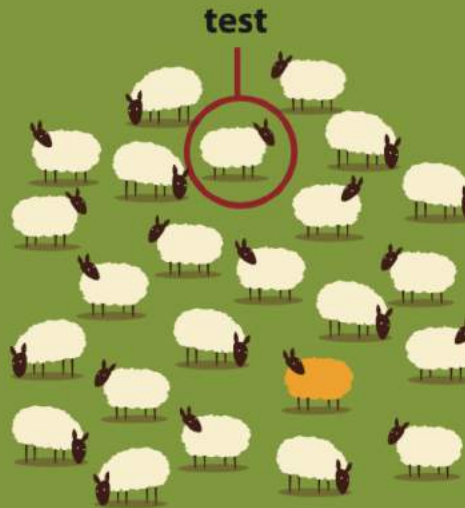
# Why do we need to test 12 animals?

- How many sheep do I need to test in a flock?

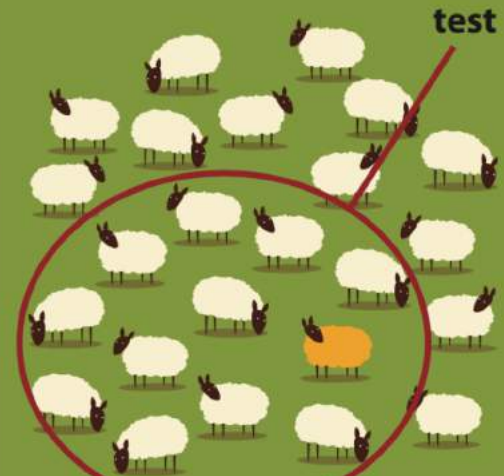
Initially, relatively few sheep will be affected following the infestation of a flock.



If we collect a sample from a single sheep, the test should detect the infestation but only if we are lucky and collect it from an infested animal.



The more animals we test, the more likely we are to find at least one infested animal, but we also need to balance that against the cost of testing more sheep than necessary.



- Test is designed to work at the flock level and we've worked out that sampling 12 animals from a flock/group (of any size) gives you the best chance of detecting scab

# Sheep scab early signs





# Sheep scab early signs



# FOR FLOCK'S SAKE

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Let's Stop Scab Together

Aims to demonstrate effectiveness of a targeted/coordinated community-based approach to controlling scab in high-risk hotspot areas

- Funded by the RDPE for 2 years (2021-2023)
- Working with designated clusters of farms within sheep scab hotspots
- Evaluation and demonstration of the approach

**1:** North West – *Cumbria/Lancashire/N. Yorks/Northumberland*

**2:** Midlands – *Shropshire & Herefordshire*

**3:** South West – *Cornwall & Devon*





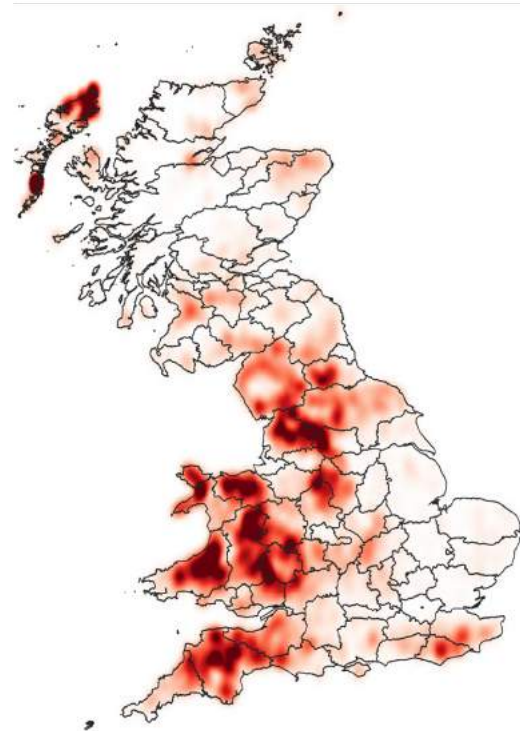
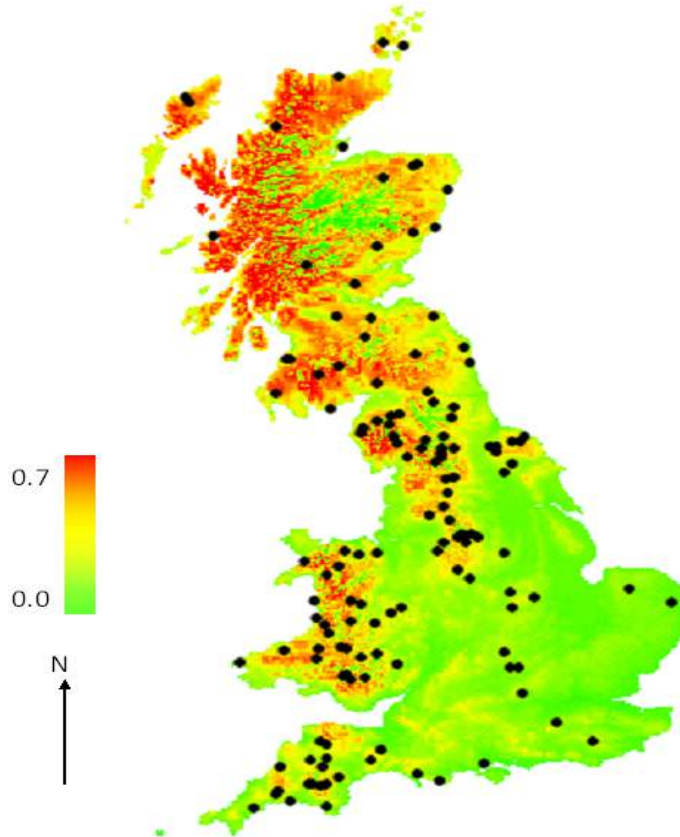
# RDPE – sheep scab control programme – England



- WP1: Identification of clusters of farms and engagement with farmers
- WP2: Initial cluster meetings
- WP3: Individual farm visits by regional coordinators
- WP4: Vet visits farms (x2) blood sampling (ELISA) and individual farm advice
- WP5: Follow up cluster meetings, coordination of treatments as required



## Sheep scab hotspots

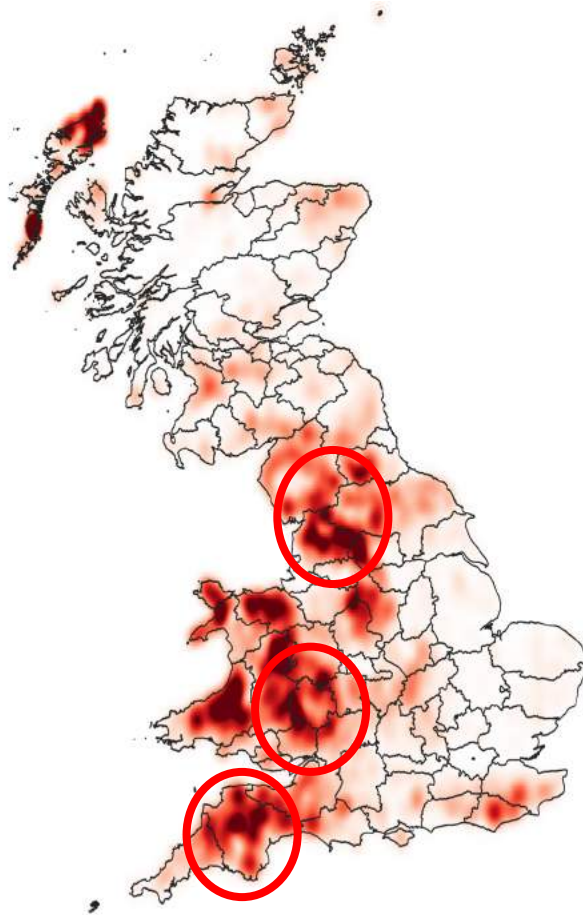


### Modelled risk :

- Density of sheep population
- Degree of connectivity between properties

## Why focus on hotspots of sheep scab

- Synchronised testing/treatment in hotspots is the most practically effective, sustainable and economical strategy
- Co-ordinated action essential – otherwise when people treat, their flocks are vulnerable to re-infection from neighbours who have not treated
- May also reduce spread of resistance
- Focus is much more cost-effective nationally
- Clusters of co-operating farmers are far more likely to succeed







## Progress to date:

- Project started in January 2021 aiming to recruit **300 farmers across 3 regions**
- Clusters of farms identified within each of the three hotspot areas
- Individual farm visits conducted from May and now complete
- Cluster meetings held from June with follow up cluster meetings underway
- Blood sampling (Moredun ELISA – via Biobest) started in late August and most 1<sup>st</sup> round testing now complete
- Vet CPD events held in August and further engagement ongoing as required
- Vet advisory visits underway across the project
- Results returned “live” to vets/coordinators and interpreted at the cluster level so that treatments can be coordinated – first treatments started in October and ongoing....

- Interest
- Most
- challenge
- All 3 r

Insufficie

- Many
- Some
- *Bottom*

Cluster ID	Percentage positive at 1st test
1	15.79%
2	26.32%
3	53.85%
4	66.67%
5	TBC
6	16.00%
7	12.50%

to join!

in group.  
antibodies?

**National boundaries and differences in approaches  
across devolved nations!**






**FOR FLOCK'S SAKE**  
Let's Stop Scab Together





# Treatments for Sheep Scab

Active	Product name(s)	Application method	Protection period for sheep scab	Withdrawal period (days)	Other ecto parasites treated
Diazinon 	Gold Fleece*	Plunge Dip	Up to 8 weeks	49	Lice, Keds, Blowfly & Ticks <i>No 2-LV drench +/- 14 days</i>
Ivermectin *	Ivomec Classic Molemec Noromectin Panomec Paramectin Premadex	Subcutaneous.  Two injections required to treat sheep scab.	None treatment only.  Clean pasture and segregation from untreated sheep post treatment required.	37 or 42  Check product	Nasal bots
Doramectin	Dectomax	Intramuscular	None treatment only.  Clean pasture and segregation from untreated sheep post treatment required	70	Nasal bots
Moxidectin 1%	Cydectin 1% Zermex 1%	Subcutaneous.  Two injections 10 days apart required to treat sheep scab.	28 days	70	Nasal bots  <i>*Not sheep treated with Footvax</i>
Moxidectin 2%	Cydectin 20MG/ML Zermex 20MG/ML	Subcutaneous at base of the ear.	60 days.	104	Nasal bots

## How many sheep to test?

For a test outcome accuracy of at least 95%

Flock size	Disease Prevalence in flock (%)			
	<u>1</u>	<u>5</u>	<u>10</u>	<u>20</u>
20	19	18	16	12
50	39	31	22	12
100	55	35	22	12
200	63	35	22	12

Giles Innocent, BioSS, unpublished