

Monthly Report: Surveillance Project SB4008 IFNg tests for bovine tuberculosis

(TC0651 and TC0751)

Number 97

Report Period 1st - 30th September 2014



AFVLA Weybridge

Issued 10 October 2014

Operational notes on terminology, definitions, re-test and re-samples test outcomes:

- “Samples” refers to an individual tube of blood taken from an individual animal which is subsequently submitted for testing. It is generally assumed that the number of samples and the number of animals are analogous as any duplicate sample blood tube from the same animal will not be tested. However, minor discrepancies may occur where the same animal is tested more than once due to a request for a resample or the animal is tested twice under different categories (for example, as a PAR-RAPID and then as part of a PAR-HERD-S).
- “Submissions” refers to an individual batch or set of samples received for testing. Submissions may comprise 1 or more samples (for example, if an entire herd is being tested it is usually sent as 1 submission). It is generally assumed that the number of submissions and the number of herds are analogous.
- Retests are samples where the first ELISA assay fails and the same sample is retested on a new ELISA plate. Each sample can be retested only once. A retest is not a reportable test outcome.
- Resamples are where a sample has been retested and failed a second time, so that the lab requests a new sample. This is a reportable test outcome.
- Rejects are samples that are not tested by the lab for one of the following reasons: blood collected into wrong type of vacutainer, samples that have not been maintained at the appropriate temperature range ($22\pm5^{\circ}\text{C}$), unlabelled samples, broken or cracked tubes, blood that is extensively clotted (small clots are OK), samples received after 4pm on the day after sample collection. Such samples are reported separately in the tables and in figure 5.
- POS (pokeweed mitogen) is a sample positive control reagent which provides a measure of the quality/viability of the blood sample. A POS fail (< 0.45 optical density reading) may indicate compromised blood quality as a result of collection/transportation conditions or due to the animal having an unusually low/suppressed cellular immune response.
- NEG (no-antigen control) is a sample negative control which provides a measure of the background antigen-independent IFN- responses. A NEG fail (> 0.3 optical density reading) may indicate a laboratory procedures problem (normally resolved during re-test) or that an animal has unusually high background levels of IFN-g.

Test Criteria

Submission Reason	Explanation	Mandatory?
Possible Herd Slaughter (PAR-HERD-S)	Parallel interferon-gamma blood testing of skin test negative cattle to inform whole or partial herd slaughters decisions	YES, if AHVLA are contemplating a herd slaughter
Persistent TB breakdowns (OTF status withdrawn) (PAR-P-CONF)	Parallel blood testing of skin test-negative cattle in chronically infected herds that have failed to resolve by repeated short-interval skin testing and fulfill a minimum of biosecurity standards.	NO (AHVLA discretion)
Parallel - Low Incidence (PAR-LOW-IN)	Parallel blood testing to maximise the probability of removing all infected cattle in a new herd breakdown in an area of low TB incidence as soon as possible after confirmation of TB.	YES
Rapid Testing of twice IR's (PAR-RAPID)	Parallel blood testing of two-times IRs identified under the severe interpretation of the skin test used in Wales.	YES (Wales only)
Parallel Edge Area OTFW (PAR-EDG-W)	Parallel blood testing to maximise the probability of removing all infected cattle in a new herd breakdown in the Edge Area (England) as soon as possible after confirmation of TB.	YES
Parallel Edge Area OTFS (PAR-EDG-S)	Discretionary parallel blood testing to maximise the probability of removing all infected cattle in a new suspected herd infection in the Edge Area (England).	NO (AHVLA discretion)
Parallel Other (PAR-OTHER)	Other parallel blood testing not covered in any of the other scenarios	NO (AHVLA discretion)
'NSR' Herds (SER-NSR)	Modified serial blood testing of individual skin test reactors and/or IRs in unconfirmed TB breakdown herds in 2-, 3- or 4-yearly areas, to clarify their infection status where there is evidence of non-specific sensitisation to bovine tuberculin (the "non-specific reactor" procedure)	NO (AHVLA's discretion)
Suspected Fraud (SER-FRAUD)	Modified serial blood test of suspected fraudulent reactors to the skin test (animals with abnormal skin swellings), in confirmed or unconfirmed TB incidents.	NO (AHVLA's discretion to firm up or rule out any suspicion of fraud and support any investigations)
Serial Other (SER-OTHER)	Serial test – other reasons	NO (AHVLA Discretion)

Table 1. Monthly Totals for September 2014

		Num samples September 2014	%	Total 2014	%	Total since 23/10/06	%
Submissions		94		936		9394	
Samples	Total (%)	8767	100.00 %	67789	100.00 %	300968	100.00 %
	England	7276	82.99 %	47917	70.69 %	203374	67.13 %
	Scotland			3406	5.02 %	24018	7.98 %
	Wales	1491	17.01 %	16466	24.29 %	75154	24.89 %
Parallel Tests	PAR-HERD-S	5	0.06 %	737	1.09 %	8587	2.85 %
	PAR-LOW-IN	1392	15.88 %	36128	53.29 %	220414	73.24 %
	PAR-OTHER	7	0.08 %	53	0.08 %	2438	0.81 %
	PAR-P-CONF	2488	28.38 %	10493	15.48 %	36123	12.00 %
	PAR-RAPID	95	1.08 %	774	1.14 %	12368	4.11 %
	PAR-S-EDG	0	0.00 %	214	0.32 %	214	0.07 %
	PAR-W-EDG	4780	54.52 %	19327	28.51 %	19327	6.42 %
	Total(% of all samples)	8767	100.00 %	67726	99.91 %	299471	99.50 %
Serial Tests	SER-FRAUD	0	0.00 %	52	0.08 %	1179	0.39 %
	SER-NSR	0	0.00 %	1	0.00 %	231	0.08 %
	SER-OTHER	0	0.00 %	10	0.01 %	87	0.03 %
	Total(% of all samples)	0	0.00 %	63	0.09 %	1497	0.50 %
	Total	8767	100.00 %	67789	100.00 %	300968	100.00 %
Retests	Total (% of all samples)	469	5.35 %	4087	6.03 %	22631	7.52 %
	England	381	4.35 %	2833	4.18 %	14583	4.85 %
	Scotland			168	0.25 %	2207	0.73 %
	Wales	88	1.00 %	1086	1.60 %	5841	1.94 %
Resamples	Total (% of all samples)	229	2.61 %	2882	4.25 %	15339	5.10 %
	England	189	2.16 %	2044	3.02 %	9839	3.27 %
	Scotland			108	0.16 %	1409	0.47 %
	Wales	40	0.46 %	730	1.08 %	4091	1.36 %
Rejects	Total (% of all samples)	5	0.06 %	828	1.22 %	5342	1.77 %
	England	5	0.06 %	673	0.99 %	3463	1.15 %
	Scotland	0	0.00 %	69	0.10 %	486	0.16 %
	Wales	0	0.00 %	86	0.13 %	1393	0.46 %

Figure 1. Number of samples submitted in each category during September 2014

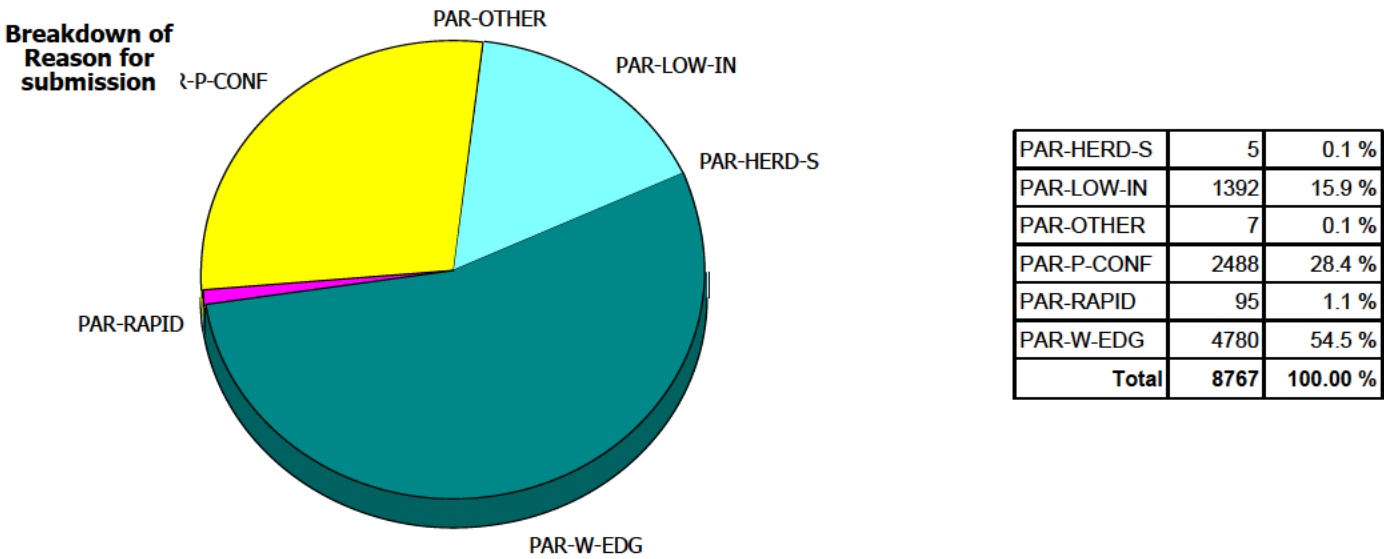


Figure 2. Number of samples submitted in each category by AHDO during September 2014

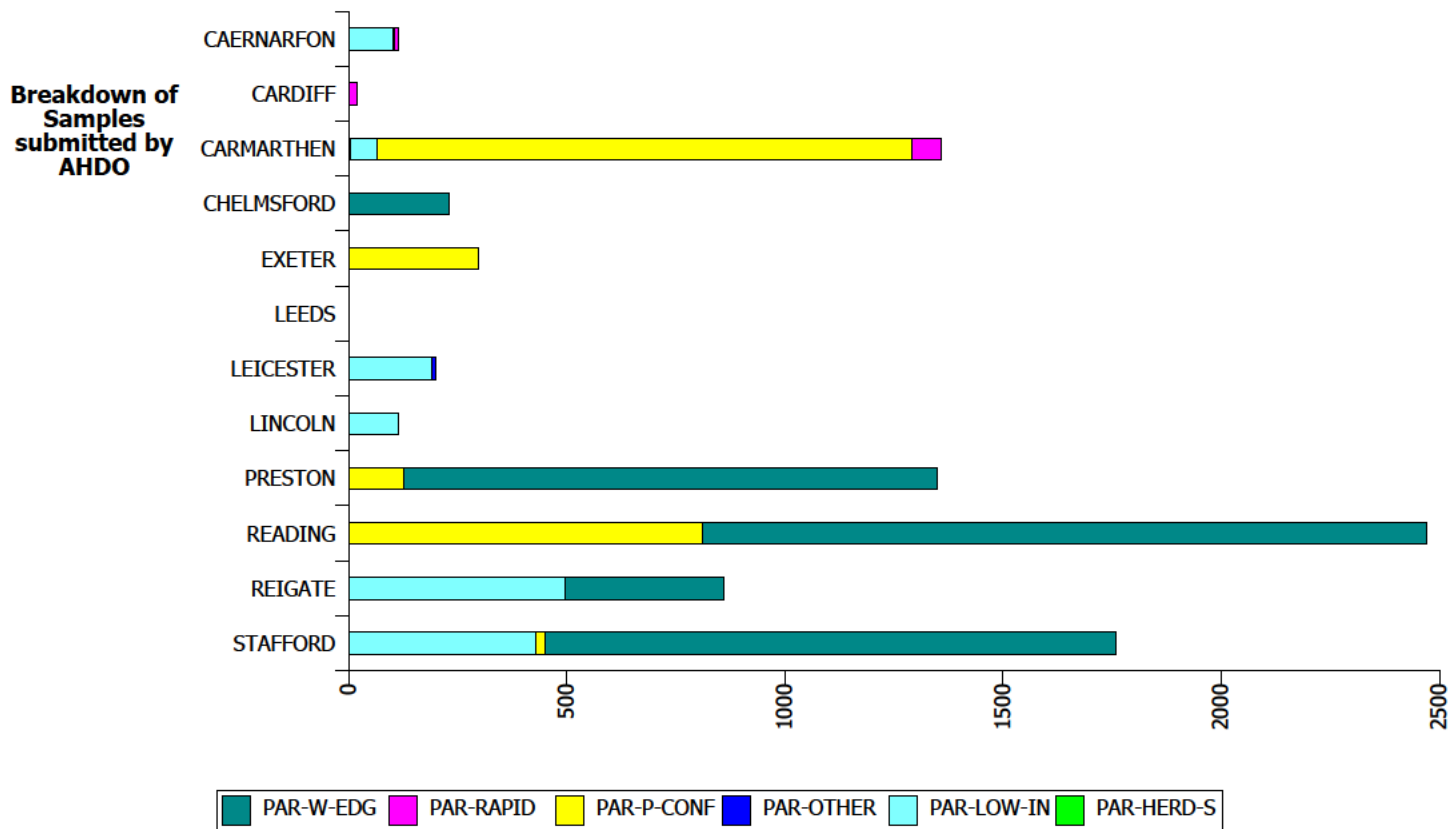


Figure 3. Number of samples submitted in each category by AHDO during 2014

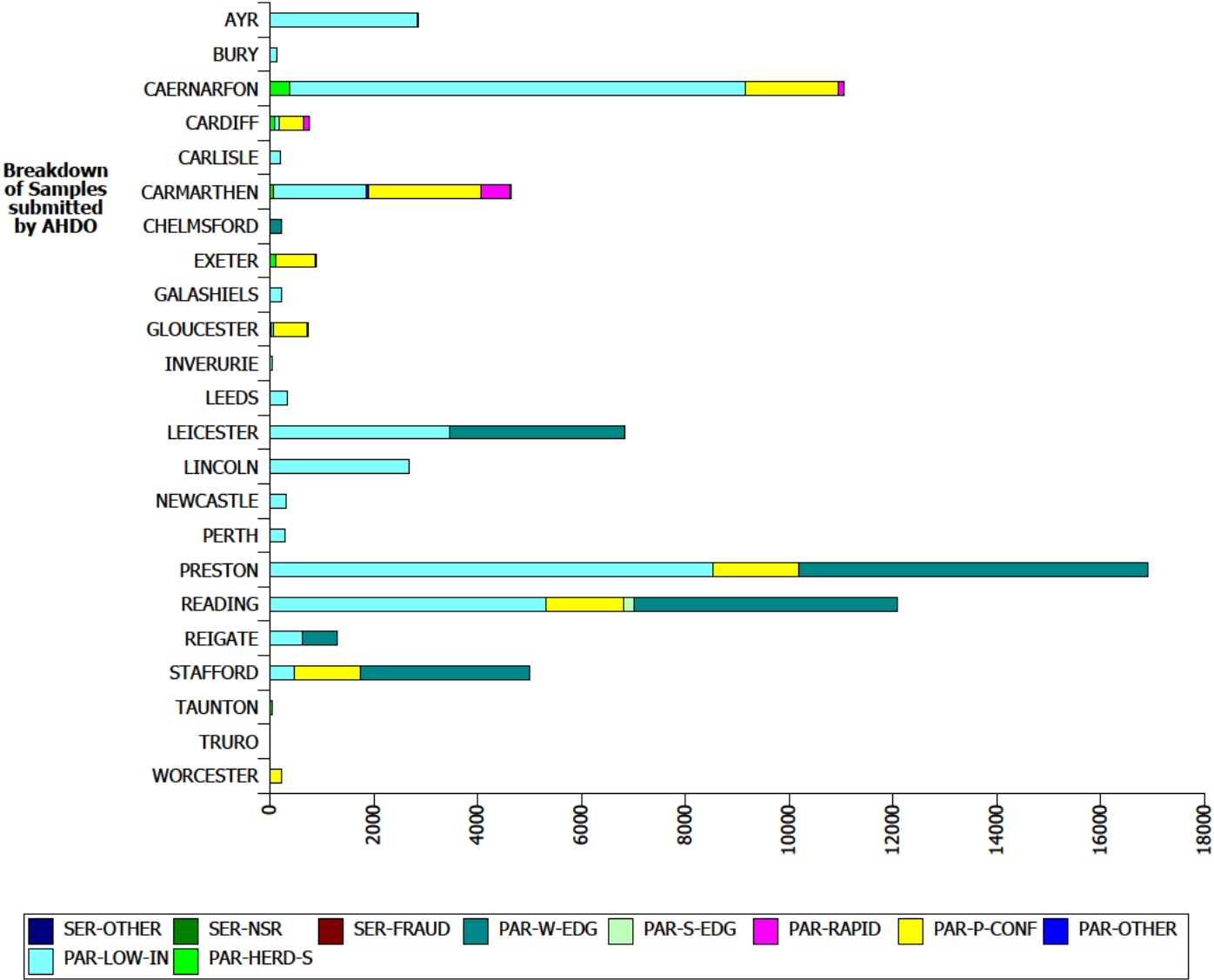


Table 2. Summary by AHDO for September 2014

Country	AHDO	Submission Reasons*	No submissions	Samples		Gamma Positive		Gamma Negatives		Retest*		Resample		Reject	
				n	% of total	n	%	n	%	n	%				
England	CHELMSFORD	PAR-W-EDG	1	229	2.61 %	22	9.61 %	204	89.08 %	3	1.31 %	3	1.31 %	0	0.00 %
	EXETER	PAR-P-CONF	1	298	3.40 %	27	9.06 %	270	90.60 %	3	1.01 %	1	0.34 %	0	0.00 %
	LEEDS	PAR-LOW-IN	1	1	0.01 %	0	0.00 %	1	100.00 %	0	0.00 %	0	0.00 %	0	0.00 %
	LEICESTER	PAR-LOW-IN	1	191	2.18 %	2	1.05 %	187	97.91 %	8	4.19 %	2	1.05 %	0	0.00 %
		PAR-OTHER	1	7	0.08 %	0	0.00 %	7	100.00 %	0	0.00 %	0	0.00 %	0	0.00 %
	LINCOLN	PAR-LOW-IN	1	114	1.30 %	2	1.75 %	104	91.23 %	14	12.28 %	8	7.02 %	0	0.00 %
	PRESTON	PAR-P-CONF	2	126	1.44 %	2	1.59 %	114	90.48 %	14	11.11 %	10	7.94 %	0	0.00 %
		PAR-W-EDG	8	1223	13.95 %	11	0.90 %	1182	96.65 %	74	6.05 %	30	2.45 %	0	0.00 %
	READING	PAR-P-CONF	3	811	9.25 %	15	1.85 %	785	96.79 %	28	3.45 %	11	1.36 %	0	0.00 %
		PAR-W-EDG	14	1660	18.93 %	9	0.54 %	1590	95.78 %	94	5.66 %	57	3.43 %	4	0.24 %
	REIGATE	PAR-LOW-IN	2	497	5.67 %	1	0.20 %	485	97.59 %	25	5.03 %	11	2.21 %	0	0.00 %
		PAR-W-EDG	3	362	4.13 %	21	5.80 %	328	90.61 %	14	3.87 %	13	3.59 %	0	0.00 %
	STAFFORD	PAR-LOW-IN	2	428	4.88 %	5	1.17 %	416	97.20 %	12	2.80 %	7	1.64 %	0	0.00 %
		PAR-P-CONF	2	23	0.26 %	4	17.39 %	13	56.52 %	6	26.09 %	6	26.09 %	0	0.00 %
		PAR-W-EDG	8	1306	14.90 %	12	0.92 %	1263	96.71 %	86	6.58 %	30	2.30 %	1	0.08 %
Wales	CAERNARFON	PAR-HERD-S	1	2	0.02 %	1	50.00 %	1	50.00 %	0	0.00 %	0	0.00 %	0	0.00 %
		PAR-LOW-IN	4	98	1.12 %	1	1.02 %	94	95.92 %	6	6.12 %	3	3.06 %	0	0.00 %
		PAR-P-CONF	1	5	0.06 %	0	0.00 %	4	80.00 %	1	20.00 %	1	20.00 %	0	0.00 %
		PAR-RAPID	2	8	0.09 %	0	0.00 %	8	100.00 %	0	0.00 %	0	0.00 %	0	0.00 %
	CARDIFF	PAR-RAPID	5	19	0.22 %	3	15.79 %	16	84.21 %	0	0.00 %	0	0.00 %	0	0.00 %
	CARMARTHEN	PAR-HERD-S	1	3	0.03 %	0	0.00 %	3	100.00 %	0	0.00 %	0	0.00 %	0	0.00 %
		PAR-LOW-IN	2	63	0.72 %	10	15.87 %	49	77.78 %	4	6.35 %	4	6.35 %	0	0.00 %
		PAR-P-CONF	8	1225	13.97 %	40	3.27 %	1153	94.12 %	77	6.29 %	32	2.61 %	0	0.00 %
		PAR-RAPID	20	68	0.78 %	12	17.65 %	56	82.35 %	0	0.00 %	0	0.00 %	0	0.00 %
		Sum:	94	8767		200		8333		469		229		5	

*For test criteria please refer to Operational notes.

* Sufficient plasma supernatant is collected and stored following the overnight culture stage of the assay such that if the sample fails any of the QC criteria, it is possible for the laboratory to 're-test' the original sample. Depending on the outcome of a retest, a resample (if QC criteria fail to be met), a positive or a negative result will be reported. Therefore, the total number of samples = the sum of positive, negative, resample and reject samples only.

Table 3a. Summary of IFN Gamma results by country and protocol September 2014

Country	Protocol	No submissions	Samples		Positive		Negatives		Retest*		Resample		Reject	
			n	% of total	n	%	n	%	n	%	n	%	n	%
England	Parallel	50	7276	100.0%	133	1.8%	6949	95.5%	381	5.2%	189	2.6%	5	0.1%
	Serial	0	0	0.0 %	0	0.0 %	0	0.0 %	0	0.0 %	0	0.0 %	0	0.0 %
	Total	50	7276	100.0%	133	1.8%	6949	95.5%	381	5.2%	189	2.6%	5	0.1%
Scotland	Parallel	0	0	0.0 %	0	0.0 %	0	0.0 %	0	0.0 %	0	0.0 %	0	0.0 %
	Serial	0	0	0.0 %	0	0.0 %	0	0.0 %	0	0.0 %	0	0.0 %	0	0.0 %
	Total	0	0	0.0 %	0	0.0 %	0	0.0 %	0	0.0 %	0	0.0 %	0	0.0 %
Wales	Parallel	44	1491	100.0%	67	4.5%	1384	92.8%	88	5.9%	40	2.7%	0	0.0 %
	Serial	0	0	0.0 %	0	0.0 %	0	0.0 %	0	0.0 %	0	0.0 %	0	0.0 %
	Total	44	1491	100.0%	67	4.5%	1384	92.8%	88	5.9%	40	2.7%	0	0.0 %
GB	Parallel	94	8767	100.0%	200	2.3%	8333	95.0%	469	5.3%	229	2.6%	5	0.1%
	Serial	0	0	0.0 %	0	0.0 %	0	0.0 %	0	0.0 %	0	0.0 %	0	0.0 %
	Total	94	8767	100.0%	200	2.3%	8333	95.0%	469	5.3%	229	2.6%	5	0.1%

* Sufficient plasma supernatant is collected and stored following the overnight culture stage of the assay such that if the sample fails any of the QC criteria, it is possible for the laboratory to 're-test' the original sample. Depending on the outcome of a retest, a resample (if QC criteria fail to be met), a positive or a negative result will be reported. Therefore, the total number of samples = the sum of positive, negative, resample and reject samples only.

Table 3b. Summary of IFN Gamma results by country and protocol (Total 2014)

Country	Protocol	No submissions	Samples		Positive		Negatives		Retest*		Resample		Reject	
			n	% of total	n	%	n	%	n	%	n	%	n	%
England	Parallel	438	47894	100.0%	1925	4.0%	43262	90.3%	2833	5.9%	2044	4.3%	663	1.4%
	Serial	4	23	0.0%	0	0.0 %	13	56.5%	0	0.0 %	0	0.0 %	10	43.5%
	Total	442	47917	100.0%	1925	4.0%	43275	90.3%	2833	5.9%	2044	4.3%	673	1.4%
Scotland	Parallel	48	3388	99.5%	107	3.2%	3104	91.6%	168	5.0%	108	3.2%	69	2.0%
	Serial	2	18	0.5%	0	0.0 %	18	100.0%	0	0.0 %	0	0.0 %	0	0.0 %
	Total	50	3406	100.0%	107	3.1%	3122	91.7%	168	4.9%	108	3.2%	69	2.0%
Wales	Parallel	439	16444	99.9%	989	6.0%	14640	89.0%	1085	6.6%	729	4.4%	86	0.5%
	Serial	5	22	0.1%	1	4.5%	20	90.9%	1	4.5%	1	4.5%	0	0.0 %
	Total	444	16466	100.0%	990	6.0%	14660	89.0%	1086	6.6%	730	4.4%	86	0.5%
GB	Parallel	925	67726	99.9%	3021	4.5%	61006	90.1%	4086	6.0%	2881	4.3%	818	1.2%
	Serial	11	63	0.1%	1	1.6%	51	81.0%	1	1.6%	1	1.6%	10	15.9%
	Total	936	67789	100.0%	3022	4.5%	61057	90.1%	4087	6.0%	2882	4.3%	828	1.2%

* Sufficient plasma supernatant is collected and stored following the overnight culture stage of the assay such that if the sample fails any of the QC criteria, it is possible for the laboratory to 're-test' the original sample. Depending on the outcome of a retest, a resample (if QC criteria fail to be met), a positive or a negative result will be reported. Therefore, the total number of samples = the sum of positive, negative, resample and reject samples only.

Table 3c. Summary of IFN Gamma results by country and protocol (Total since test roll out)

Country	Protocol	No submissions	Samples		Positive		Negatives		Retest*		Resample		Reject	
			n	% of total	n	%	n	%	n	%	n	%	n	%
England	Parallel	4485	201301	99.6%	12146	6.0%	175929	87.4%	14547	7.2%	9794	4.9%	3440	1.7%
	Serial	65	749	0.4%	18	2.4%	663	88.5%	36	4.8%	45	6.0%	23	3.1%
	Total	4550	202050	100.0%	12164	6.0%	176592	87.4%	14583	7.2%	9839	4.9%	3463	1.7%
Scotland	Parallel	325	23980	99.8%	1223	5.1%	20862	87.0%	2205	9.2%	1408	5.9%	486	2.0%
	Serial	7	38	0.2%	0	0.0 %	37	97.4%	2	5.3%	1	2.6%	0	0.0 %
	Total	332	24018	100.0%	1223	5.1%	20899	87.0%	2207	9.2%	1409	5.9%	486	2.0%
Wales	Parallel	4471	74190	99.1%	7181	9.7%	61586	83.0%	5746	7.7%	4041	5.4%	1380	1.9%
	Serial	41	710	0.9%	18	2.5%	629	88.6%	95	13.4%	50	7.0%	13	1.8%
	Total	4512	74900	100.0%	7199	9.6%	62215	83.1%	5841	7.8%	4091	5.5%	1393	1.9%
GB	Parallel	9281	299471	99.5%	20550	6.9%	258377	86.3%	22498	7.5%	15243	5.1%	5306	1.8%
	Serial	113	1497	0.5%	36	2.4%	1329	88.8%	133	8.9%	96	6.4%	36	2.4%
	Total	9394	300968	100.0%	20586	6.8%	259706	86.3%	22631	7.5%	15339	5.1%	5342	1.8%

* Sufficient plasma supernatant is collected and stored following the overnight culture stage of the assay such that if the sample fails any of the QC criteria, it is possible for the laboratory to 're-test' the original sample. Depending on the outcome of a retest, a resample (if QC criteria fail to be met), a positive or a negative result will be reported. Therefore, the total number of samples = the sum of positive, negative, resample and reject samples only.

Table 4a. Summary of IFN Gamma results by submission reason (September 2014)

Submission Reason (full)	No submissions	Samples		Gamma Positive		Gamma Negatives		Retest		Resample		Reject	
		n	% of total	n	%	n	%	n	%	n	%	n	%
Possible Herd Slaughter	2	5	0.1%	1	20.0%	4	80.0%	0		0		0	
Persistent TB breakdowns (OTFW)	17	2488	28.4%	88	3.5%	2339	94.0%	129	5.2 %	61	2.5 %	0	
Parallel - Low Incidence	13	1392	15.9%	21	1.5%	1336	96.0%	69	5.0 %	35	2.5 %	0	
Rapid Testing of twice IR's	27	95	1.1%	15	15.8%	80	84.2%	0		0		0	
Parallel - OTFW in Edge Area	34	4780	54.5%	75	1.6%	4567	95.5%	271	5.7 %	133	2.8 %	5	0.1 %
Parallel Other	1	7	0.1%	0	0.0 %	7	100.0%	0		0		0	
	94	8767	100.0%	200	2.3%	8333	95.0%	469	5.3 %	229	2.6 %	5	0.1 %

Table 4b. Summary of IFN Gamma results by submission reason (Total 2014)

Submission Reason (full)	No submissions	Samples		Gamma Positive		Gamma Negatives		Retest		Resample		Reject	
		n	% of total	n	%	n	%	n	%	n	%	n	%
Possible Herd Slaughter	34	737	1.1%	148	20.1%	529	71.8%	75	10.2 %	48	6.5 %	12	1.6 %
Persistent TB breakdowns (OTFW)	86	10493	15.5%	719	6.9%	9287	88.5%	636	6.1 %	477	4.5 %	10	0.1 %
Parallel - Low Incidence	393	36128	53.3%	1448	4.0%	32186	89.1%	2340	6.5 %	1733	4.8 %	761	2.1 %
Rapid Testing of twice IR's	243	774	1.1%	249	32.2%	486	62.8%	41	5.3 %	26	3.4 %	13	1.7 %
Parallel - OTFW in Edge Area	163	19327	28.5%	450	2.3%	18270	94.5%	975	5.0 %	585	3.0 %	22	0.1 %
Parallel Other	5	53	0.1%	4	7.5%	47	88.7%	2	3.8 %	2	3.8 %	0	
'NSR' Herds	1	1	0.0%	0	0.0 %	1	100.0%	0		0		0	
Suspected Fraud	8	52	0.1%	1	1.9%	40	76.9%	1	1.9 %	1	1.9 %	10	19.2 %
Serial Other	2	10	0.0%	0	0.0 %	10	100.0%	0		0		0	
Parallel - OTFS in Edge Area	1	214	0.3%	3	1.4%	201	93.9%	17	7.9 %	10	4.7 %	0	
	936	67789	100.0%	3022	4.5%	61057	90.1%	4087	6.0 %	2882	4.3 %	828	1.2 %

Table 4c. Summary of IFN Gamma results by submission reason (Total since rollout)

Submission Reason*	No submissions	Samples tested		Gamma Positive		Gamma Negatives		Retest		Resample		Reject	
		n	% of total	n	%	n	%	n	%	n	%	n	%
Possible Herd Slaughter	234	8587	2.9%	1094	12.7%	6711	78.2%	734	8.55 %	556	6.47 %	225	2.62 %
Persistent TB breakdowns (OTFW)	438	36123	12.0%	3244	9.0%	30615	84.8%	2517	6.97 %	1736	4.81 %	529	1.46 %
Parallel - Low Incidence	2556	220414	73.2%	10180	4.6%	194301	88.2%	17175	7.79 %	11624	5.27 %	4314	1.96 %
Rapid Testing of twice IR's	5805	12368	4.1%	5328	43.1%	6300	50.9%	833	6.74 %	556	4.50 %	184	1.49 %
Parallel - OTFW in Edge Area	163	19327	6.4%	450	2.3%	18270	94.5%	975	5.04 %	585	3.03 %	22	0.11 %
Parallel Other	84	2438	0.8%	251	10.3%	1979	81.2%	247	10.13 %	176	7.22 %	32	1.31 %
'NSR' Herds	29	231	0.1%	9	3.9%	210	90.9%	13	5.63 %	12	5.19 %	0	0.00 %
Suspected Fraud	74	1179	0.4%	26	2.2%	1064	90.2%	118	10.01 %	66	5.60 %	23	1.95 %
Serial Other	10	87	0.0%	1	1.1%	55	63.2%	2	2.30 %	18	20.69 %	13	14.94 %
Parallel - OTFS in Edge Area	1	214	0.1%	3	1.4%	201	93.9%	17	7.94 %	10	4.67 %	0	0.00 %
	9394	300968		20586		259706		22631		15339		5342	

*For test criteria please refer to Operational notes.

Year	Month	Herds sampled	Samples tested	Herds with positives	IFNg+ samples	Wrong Eartags	No PM No Cult	No PM Cult Pend	No PM Cult Neg	No PM Cult Mb	No PM Cult Other	VL No Cult	VL Cult Pend	VL Cult Neg	VL Cult Mb	VL Cult Other	NVL No Cult	NVL Cult Pend	NVL Cult Neg	NVL Cult Mb	NVL Cult Other
2013	October	120	4947	58	198	2	4	0	0	0	1	6	0	0	0	0	127	0	58	0	1
	November	65	3647	37	141	3	3	0	0	0	3	7	0	0	7	0	79	0	39	0	3
	December	70	4473	46	227	15	0	0	0	0	0	34	0	0	2	0	145	0	29	1	0
2014	January	102	7192	75	616	5	6	0	0	0	4	93	0	1	2	0	395	0	91	2	4
	February	100	7276	71	438	2	7	0	0	0	2	48	0	0	1	0	329	0	48	0	2
	March	122	6799	66	405	5	17	0	0	0	4	15	0	2	5	0	250	15	90	1	4
	April	95	7200	67	477	0	21	0	0	0	4	60	0	0	5	0	354	3	29	1	4
	May	111	8273	61	204	0	0	0	0	0	2	6	0	0	7	0	138	0	50	0	2
	June	125	9482	61	340	0	9	0	0	0	0	72	2	0	2	0	210	11	28	0	0
	July	107	6462	54	237	0	24	0	0	0	0	45	3	0	0	0	142	23	0	0	0
	August	80	6338	38	105	16	67	0	0	0	0	1	0	0	0	0	9	5	0	0	0
	September	94	8767	47	200	153		0													

Total since Test Rollout	9394	300968	5584	20586	750	592	0	93	13	0	1652	5	104	642	2	11403	72	4950	79	71
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Table 5b. Summary of culture results for IFNg positive animals.

Month	Herds sampled	Samples tested	Herds with positives	IFNg+ samples	VL No Cult	VL Cult Pend	VL Cult Neg	VL Cult Mb	VL Cult Other	NVL No Cult	NVL Cult Pend	NVL Cult Neg	NVL Cult Mb	NVL Cult Other
England	4561	202164	2888	12171	958	5	74	481	2	6267	42	3114	57	54
Scotland	332	24018	195	1223	135	0	5	14	0	788	0	138	1	5
Wales	4501	74786	2501	7192	559	0	25	147	0	4348	30	1698	21	12
Total since Test Rollout	9394	300968	5584	20586	1652	5	104	642	2	11403	72	4950	79	71

Key: NoPM= no PME performed/recorded on Vet Net.
No Cult=M. bovis culture not performed, CultPend= M. bovis culture pending, CultNeg= M. bovis culture negative,
CultMtb= M. bovis culture positive, CultOther= Organism other than M. bovis cultured.

Figure 4a. Number of herds sampled for IFNg and numbers of herds with any positive IFNg results.

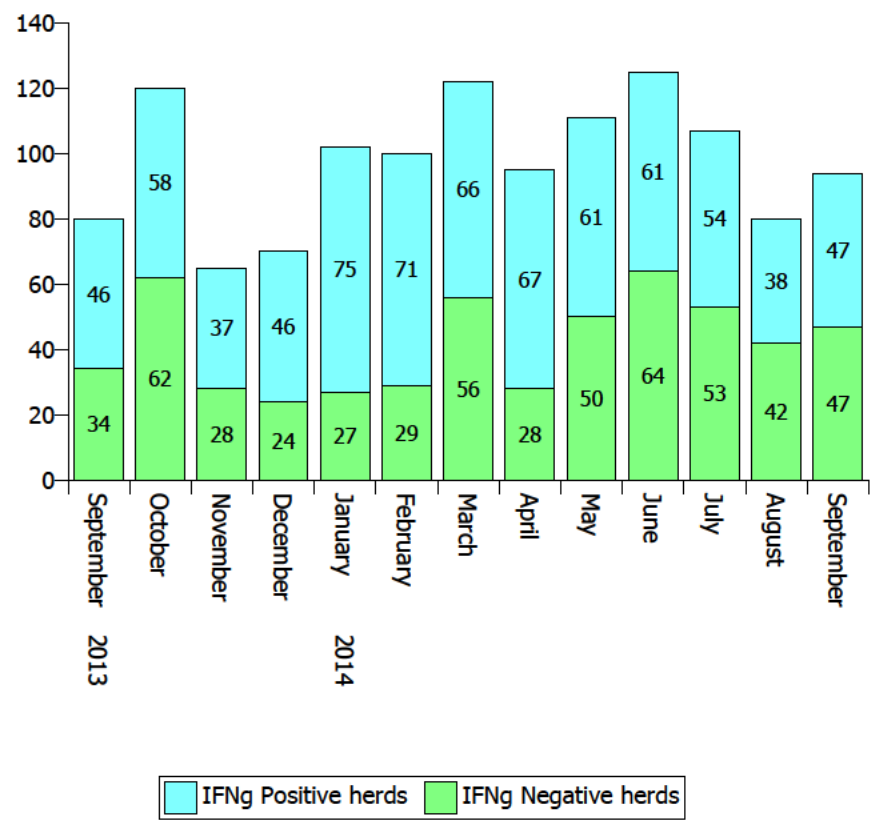
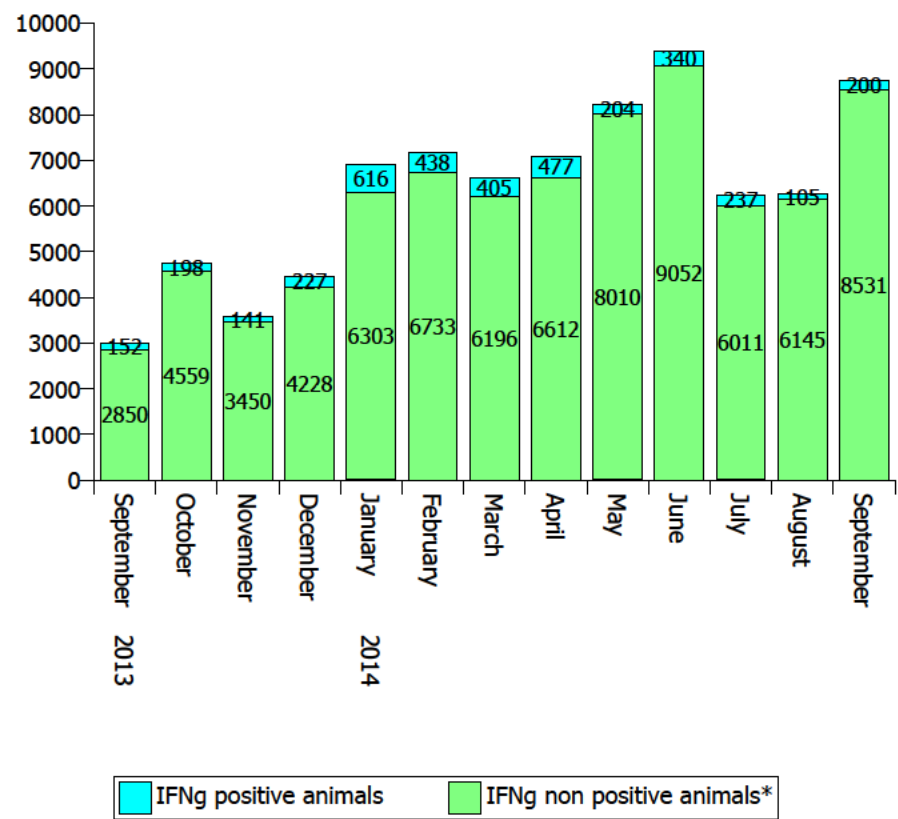
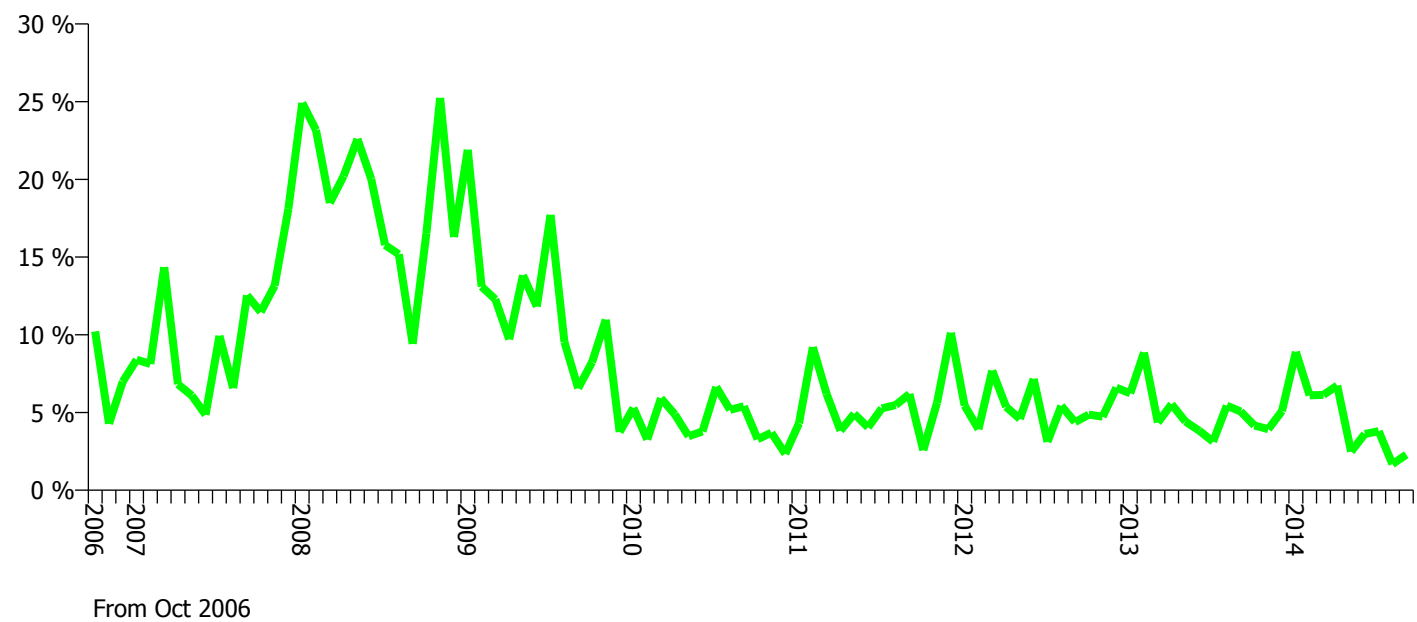


Figure 4b. Number of animals sampled for IFNg and numbers of animals with positive IFNg results.



*Includes all animals with IFNg test negative, resample and reject outcomes

Figure 4c. Percentage of animals tested with IFNg giving a positive response



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Total
2006										10 %	4 %	7 %	5 %
2007	8 %	8 %	14 %	7 %	6 %	5 %	10 %	7 %	13 %	11 %	13 %	18 %	10 %
2008	25 %	23 %	18 %	20 %	23 %	20 %	16 %	15 %	9 %	17 %	25 %	16 %	20 %
2009	22 %	13 %	12 %	10 %	14 %	12 %	18 %	10 %	7 %	8 %	11 %	4 %	12 %
2010	5 %	3 %	6 %	5 %	3 %	4 %	7 %	5 %	5 %	3 %	4 %	2 %	5 %
2011	4 %	9 %	6 %	4 %	5 %	4 %	5 %	5 %	6 %	3 %	6 %	10 %	5 %
2012	5 %	4 %	8 %	5 %	5 %	7 %	3 %	5 %	4 %	5 %	5 %	7 %	6 %
2013	6 %	9 %	4 %	6 %	4 %	4 %	3 %	5 %	5 %	4 %	4 %	5 %	5 %
2014	9 %	6 %	6 %	7 %	2 %	4 %	4 %	2 %	2 %				5 %

Figure 5. Rates of resamples including the fail rates broken down for positive (POS) and negative (NEG) controls.

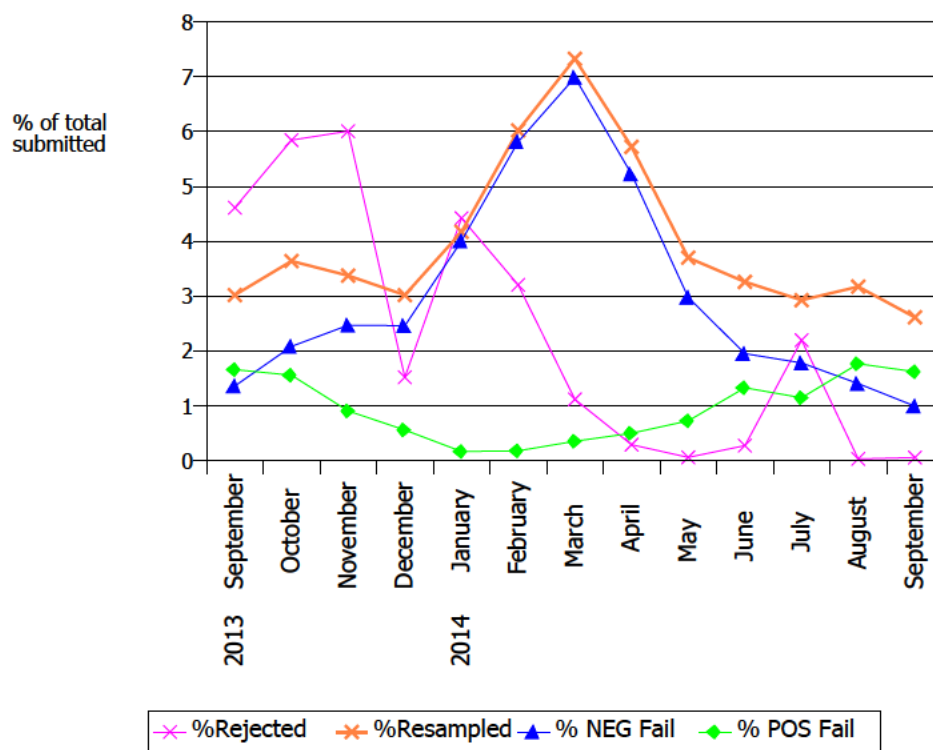


Figure 6. Proportion of samples retested, or requiring a resample, during September 2014 (% submission per AHDO)

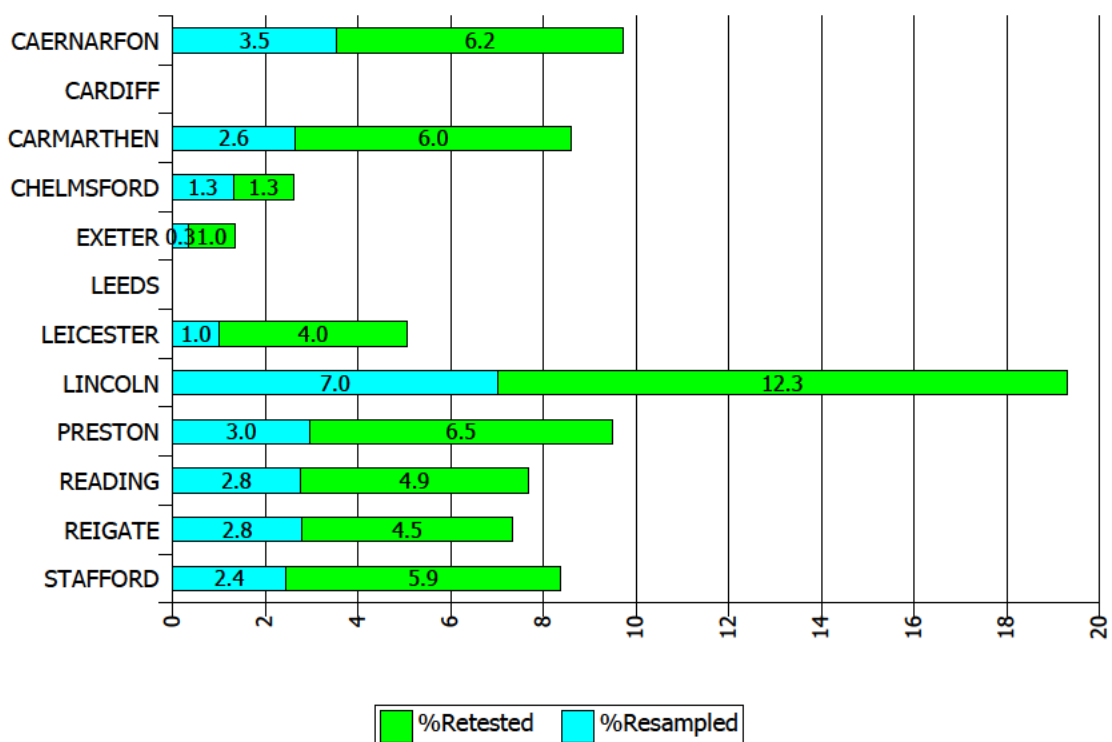


Table 6a: Number of animals and submissions tested in September 2014

Country	No. animals	No of IFHg+ animals	% Positive animals	No. samples	No of IFHg+ samples	% Positive samples
England	7249	133	1.8%	7276	133	1.8%
Wales	1482	67	4.5%	1491	67	4.5%
GB	8731	200	2.3%	8767	200	2.3%

Table 6b: Number of animals and submissions tested in 2014

Country	No. animals	No of IFHg+ animals	% Positive animals	No. samples	No of IFHg+ samples	% Positive samples
England	44188	1924	4.4%	47917	1925	4.0%
Scotland	3257	107	3.3%	3406	107	3.1%
Wales	14897	990	6.6%	16466	990	6.0%
GB	62341	3021	4.8%	67789	3022	4.5%

Table 6c: Number of animals and submissions tested since test rollout

Country	No. animals	No of IFHg+ animals	% Positive animals	No. samples	No of IFHg+ samples	% Positive samples
England	175679	12158	6.9%	202050	12164	6.0%
Scotland	20837	1223	5.9%	24018	1223	5.1%
Wales	62942	7196	11.4%	74900	7199	9.6%
GB	259344	20577	7.9%	300968	20586	6.8%

Table 6d (Annual number of samples tested since test rollout, by country)

	2006*	2007	2008	2009	2010	2011	2012	2013	2014^
England	4,307	23,520	14,913	18,384	16,268	16,194	26,209	34,338	47,917
Scotland	100	3,875	3,345	5,177	2,320	1,217	3,420	1,158	3,406
Wales	862	3,231	4,087	7,063	7,758	7,416	15,922	12,095	16,466
GB Total	5,269	30,626	22,345	30,624	26,346	24,827	45,551	47,591	67,789

*(Oct to Dec)

^to end of current month

