



Food and Agriculture
Organization of the
United Nations

8TH ANNUAL MEETING OF THE PPR GLOBAL RESEARCH AND EXPERTISE NETWORK (PPR-GREN)

25 – 27 NOVEMBER 2025 QINGDAO, CHINA



中国动物卫生与流行病学中心
China Animal Health And Epidemiology Center

中华人民共和国农业农村部

Ministry of Agriculture and Rural Affairs of the People's Republic of China



EU Reference laboratory for Peste des Petits Ruminants



Funded by
the European Union



WOAH

Reference Laboratory
Network for PPR

WOAH Reference Laboratory
for peste des petits ruminants

Reference Centre



World Organisation
for Animal Health
Founded as OIE

Proficiency Testing and Laboratory Diagnostics Competence

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CIRAD

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WOAH-EURL-PPR: activities

To ensure availability and use of high quality methods and high quality performance by NRLs

- 1) Distribution of Standard Operating Procedures
 - Updated SOPs on diagnostic, sampling and sequencing methods
 - Development of assays
- 2) Production and supply of reference materials
 - Positive controls for PCR and serology available upon request
- 3) Evaluation of PPRV virulence and susceptibility of small ruminants
 - Immune response to PPRV strains of different virulence
 - Evaluation of in vitro assay to determine host susceptibility to PPRV
- 4) Organisation of PT (every May)
 - In parallel to PT organized for EURL labs (>50 participants)

What is a proficiency test ?

Evaluation of a participant's performance against pre-established criteria by means of interlaboratory comparisons.

Interest for participants

- Ensure the quality of results of laboratory
- Demonstrate laboratory competence
- Tool for laboratory progress
- If laboratory need to meet accreditation requirement
- Training of the personnel of the participating laboratories.

➤ If laboratory needs to meet accreditation requirement like ISO17025

- § 7.7.2 << The laboratory should monitor its performance by comparing it with the results of other laboratories, if this exists and if it is appropriate.

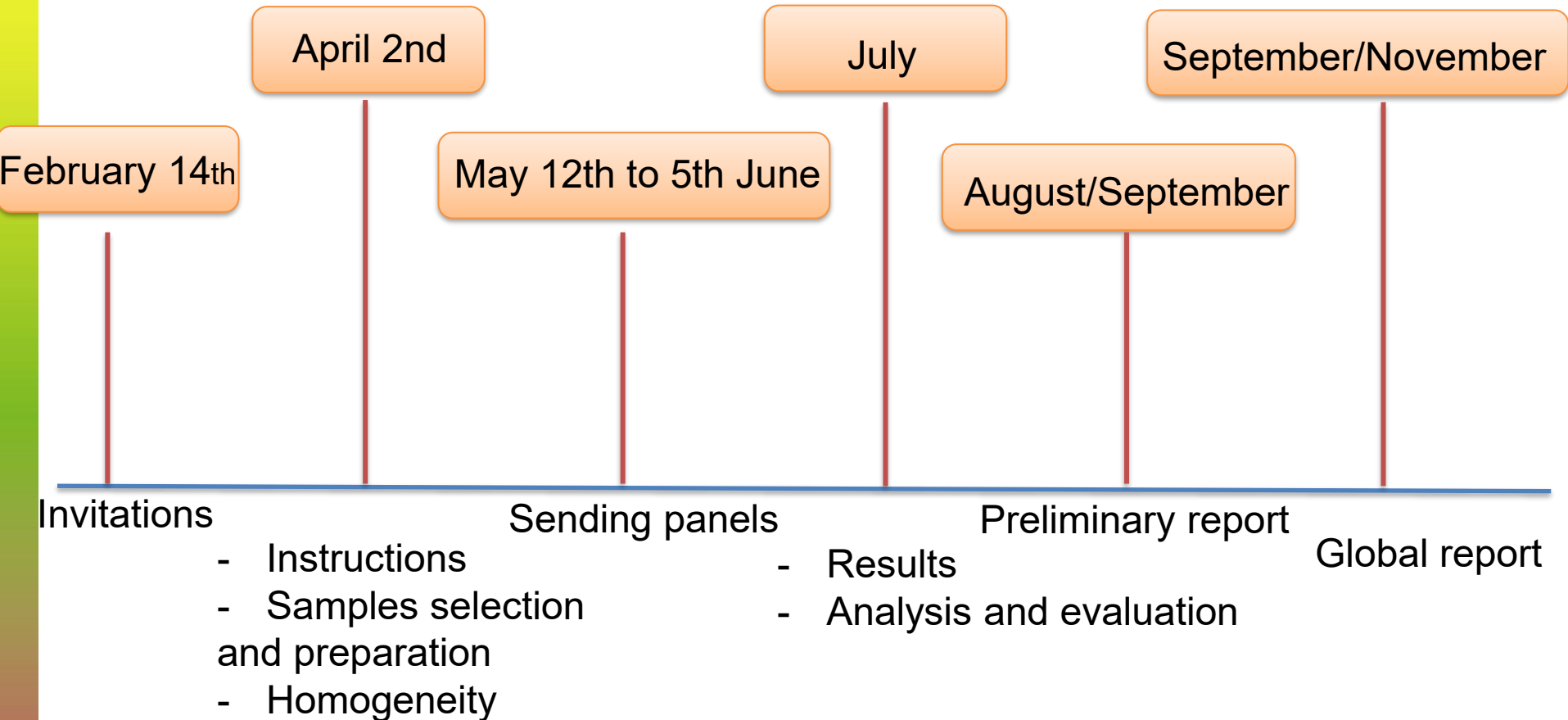
This monitoring must be planned and reviewed and must include, but not be limited to, one of the following two participations :

- a) Participation in proficiency testing
- b) Participation in interlaboratory comparisons other than proficiency testing. >>

Which applicable standard?

Proficiency testing is an important element of ISO/IEC 17025 accreditation. So important, that it has its own ISO standard (i.e. **ISO/IEC 17043** :
”General requirements for proficiency testing”)

PT chronology



Samples selection and preparation

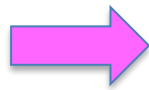
➤ For molecular biology :

- ❑ If possible, different lineage of the PPR virus can be included in the panel
- ❑ According to the epidemiology of the PPR virus, the lineages representing a threat to the geographical region are included in the panel as a priority
- ❑ In the absence of large quantities of naturally infected samples, an isolated and inactivated virus can be prepared, spiked and lyophilized, this allows the samples to be sent at room temperature
- ❑ Sometimes we use matrices representing real-life cases (swabs, homogenized organs) but sent in dry ice.

Control of the homogeneity
of the entities subjected to
the test

According to the ISO17043 recommendations:

- Each batch samples, ten replicates are tested with the appropriate method
- Each sample is repeated twice for a total of 20 results per sample
- This test is called the « Homogeneity test »



Determine the reference statutes

Criteria for evaluation of results

- Detectability
- Sensitivity
- Specificity



Eliminatory criteria

- Reporting of the results
- Validation
- Reproducibility
- Repeatability
- Dose-effect law



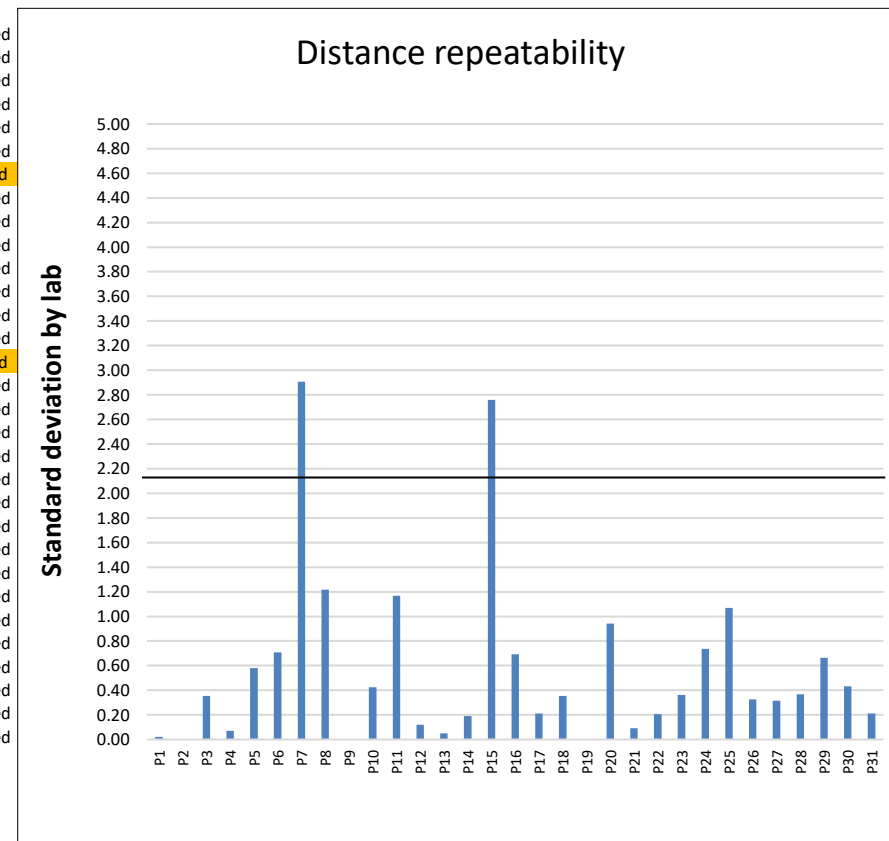
Non-eliminary and
informatory criteria

Results analysis and statistical processing

➤ Non-Eliminating and inforamatory evaluation:

- **Repeatability** : some samples are repeated in the panel

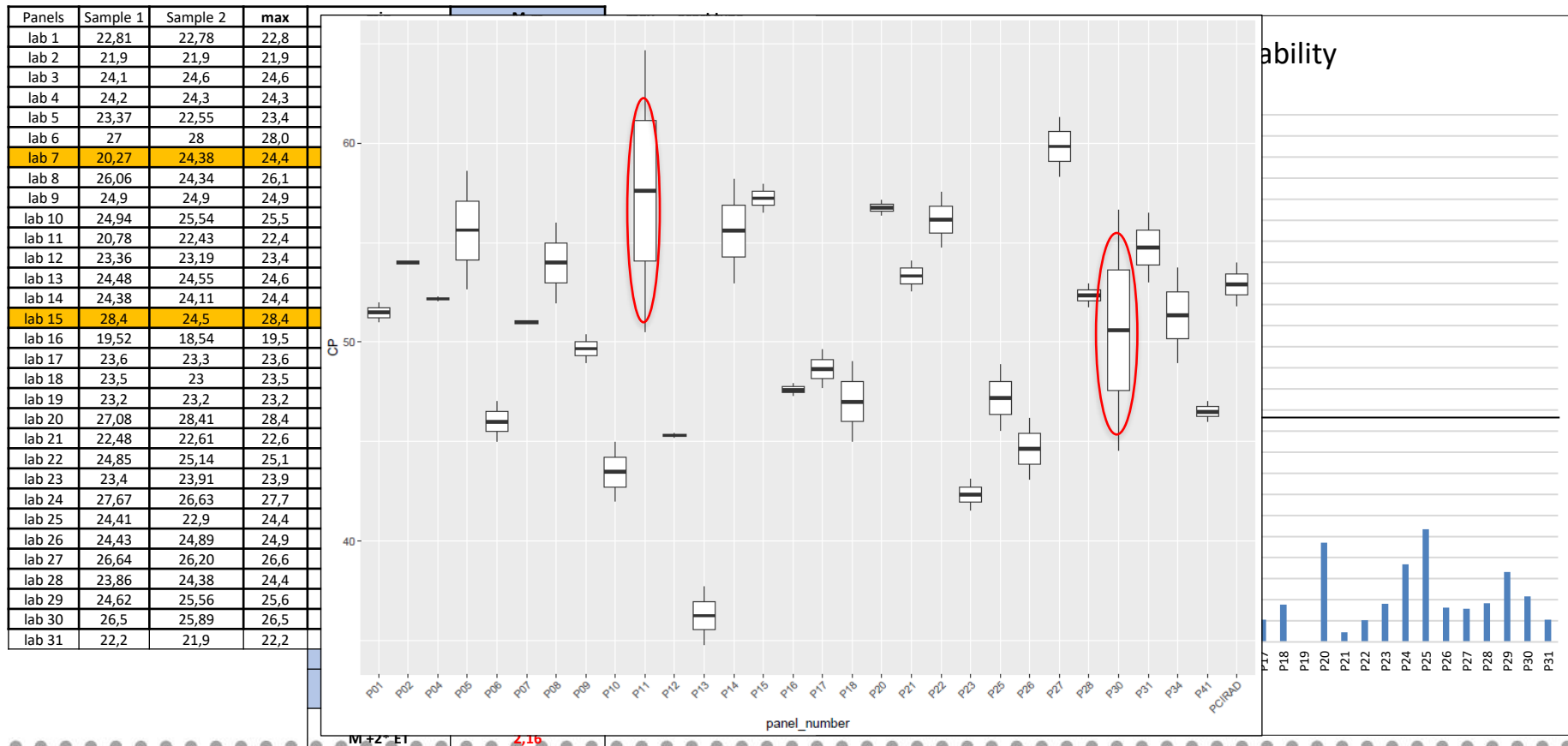
Panels	Sample 1	Sample 2	max	min	M-m	moy	ecart type	
lab 1	22,81	22,78	22,8	22,8	0,03	22,8	0,02	accepted
lab 2	21,9	21,9	21,9	21,9	0,00	21,9	0,00	accepted
lab 3	24,1	24,6	24,6	24,1	0,50	24,4	0,35	accepted
lab 4	24,2	24,3	24,3	24,2	0,10	24,3	0,07	accepted
lab 5	23,37	22,55	23,4	22,6	0,82	23,0	0,58	accepted
lab 6	27	28	28,0	27,0	1,00	27,5	0,71	accepted
lab 7	20,27	24,38	24,4	20,3	4,11	22,3	2,91	rejected
lab 8	26,06	24,34	26,1	24,3	1,72	25,2	1,22	accepted
lab 9	24,9	24,9	24,9	24,9	0,00	24,9	0,00	accepted
lab 10	24,94	25,54	25,5	24,9	0,60	25,2	0,42	accepted
lab 11	20,78	22,43	22,4	20,8	1,65	21,6	1,17	accepted
lab 12	23,36	23,19	23,4	23,2	0,17	23,3	0,12	accepted
lab 13	24,48	24,55	24,6	24,5	0,07	24,5	0,05	accepted
lab 14	24,38	24,11	24,4	24,1	0,27	24,2	0,19	accepted
lab 15	28,4	24,5	28,4	24,5	3,90	26,5	2,76	rejected
lab 16	19,52	18,54	19,5	18,5	0,98	19,0	0,69	accepted
lab 17	23,6	23,3	23,6	23,3	0,30	23,5	0,21	accepted
lab 18	23,5	23	23,5	23,0	0,50	23,3	0,35	accepted
lab 19	23,2	23,2	23,2	23,2	0,00	23,2	0,00	accepted
lab 20	27,08	28,41	28,4	27,1	1,33	27,7	0,94	accepted
lab 21	22,48	22,61	22,6	22,5	0,13	22,5	0,09	accepted
lab 22	24,85	25,14	25,1	24,9	0,29	25,0	0,21	accepted
lab 23	23,4	23,91	23,9	23,4	0,51	23,7	0,36	accepted
lab 24	27,67	26,63	27,7	26,6	1,04	27,2	0,74	accepted
lab 25	24,41	22,9	24,4	22,9	1,51	23,7	1,07	accepted
lab 26	24,43	24,89	24,9	24,4	0,46	24,7	0,33	accepted
lab 27	26,64	26,20	26,6	26,2	0,45	26,4	0,31	accepted
lab 28	23,86	24,38	24,4	23,9	0,52	24,1	0,37	accepted
lab 29	24,62	25,56	25,6	24,6	0,94	25,1	0,66	accepted
lab 30	26,5	25,89	26,5	25,9	0,61	26,2	0,43	accepted
lab 31	22,2	21,9	22,2	21,9	0,30	22,1	0,21	accepted
Mean(M)					0,80			
Mean standard deviation (ET)					0,66			
M+2* ET					equal to 0,8+(2*0,66) = 2,16			



Results analysis and statistical processing

➤ Non-Eliminating and informatory evaluation:

- **Repeatability**: some samples are repeated in the panel, graphical and Cochran's test

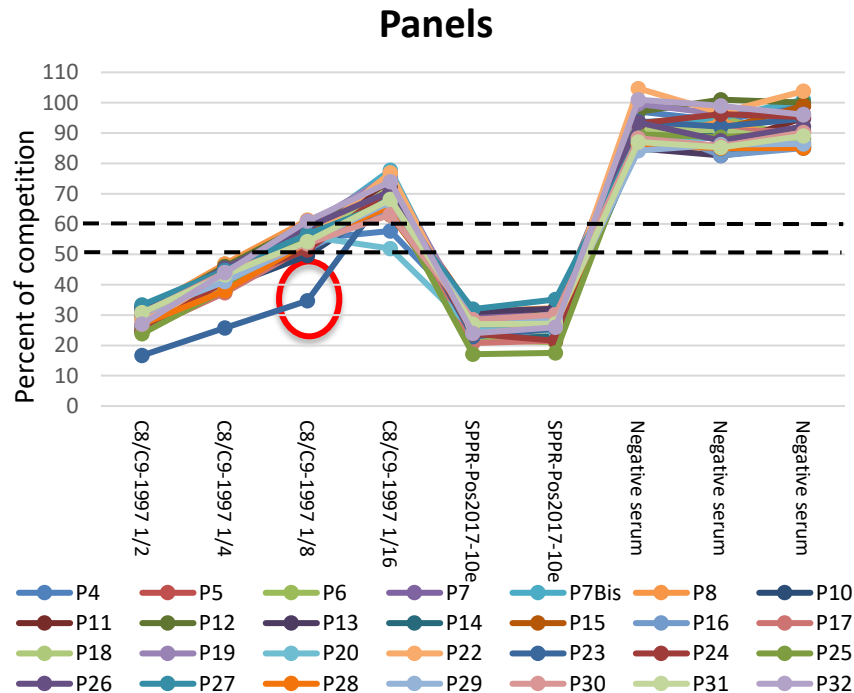


Results analysis and statistical processing

- Non-Eliminating and informatory evaluation: :
 - **Homogeneity**: the result obtained by all the laboratories with the same entity is compared
- A [Grubb's](#) test can be performed
- This test is based on the « mean » and « standard deviation » of all the results
- According to a statistical calculation, outlier results are identified

Results analysis and statistical processing

➤ Non-Eliminating and informatory evaluation:



Calculs	Nombre de valeurs	28	27	27	27	27	27	27	27	27	27	27	27	27
	Moyenne	55,079	55,833	55,833	55,833	55,833	55,833	55,833	55,833	55,833	55,833	55,833	55,833	55,833
Conclusion	Ecart-type	5,025	3,113	3,113	3,113	3,113	3,113	3,113	3,113	3,113	3,113	3,113	3,113	3,113
	G1	4,051	1,991	1,991	1,991	1,991	1,991	1,991	1,991	1,991	1,991	1,991	1,991	1,991
Conclusion	Gp	1,230	1,743	1,743	1,743	1,743	1,743	1,743	1,743	1,743	1,743	1,743	1,743	1,743
	Gmax	4,051	1,991	1,991	1,991	1,991	1,991	1,991	1,991	1,991	1,991	1,991	1,991	1,991
Conclusion	t 99%	4,103	4,113	4,113	4,113	4,113	4,113	4,113	4,113	4,113	4,113	4,113	4,113	4,113
	t 95%	3,480	3,481	3,481	3,481	3,481	3,481	3,481	3,481	3,481	3,481	3,481	3,481	3,481
Conclusion	Gc 1%	3,179	3,179	3,179	3,179	3,179	3,179	3,179	3,179	3,179	3,179	3,179	3,179	3,179
	Gc 5%	2,876	2,859	2,859	2,859	2,859	2,859	2,859	2,859	2,859	2,859	2,859	2,859	2,859
Conclusion	Valeur aberrante (1%)	OUI	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
	Valeur isolée (5%)	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Conclusion	Labo aberrant / isolé	P23												
	Série	P4	54,9	54,925	54,925	54,925	54,925	54,925	54,925	54,925	54,925	54,925	54,925	54,925
Conclusion	ta	P5	55,0	55,105	55,105	55,105	55,105	55,105	55,105	55,105	55,105	55,105	55,105	55,105
	ts	P6	53,0	53	53	53	53	53	53	53	53	53	53	53
Conclusion	ts	P7	58,0	58	58	58	58	58	58	58	58	58	58	58
	ts	P7Bis	57,9	57,93	57,93	57,93	57,93	57,93	57,93	57,93	57,93	57,93	57,93	57,93
Conclusion	ts	P8	61,3	61,26	61,26	61,26	61,26	61,26	61,26	61,26	61,26	61,26	61,26	61,26
	ts	P10	49,6	49,635	49,635	49,635	49,635	49,635	49,635	49,635	49,635	49,635	49,635	49,635
Conclusion	ts	P11	59,0	59	59	59	59	59	59	59	59	59	59	59
	ts	P12	60,0	60	60	60	60	60	60	60	60	60	60	60
Conclusion	ts	P13	58,5	58,477347	58,477347	58,477347	58,477347	58,477347	58,477347	58,477347	58,477347	58,477347	58,477347	58,477347
	ts	P14	53,0	53,033	53,033	53,033	53,033	53,033	53,033	53,033	53,033	53,033	53,033	53,033
Conclusion	ts	P15	58,0	58	58	58	58	58	58	58	58	58	58	58
	ts	P16		51,734328	51,734328	51,734328	51,734328	51,734328	51,734328	51,734328	51,734328	51,734328	51,734328	51,734328
Conclusion	ts	P17	52,7	52,66	52,66	52,66	52,66	52,66	52,66	52,66	52,66	52,66	52,66	52,66
	ts	P18	54,0	54	54	54	54	54	54	54	54	54	54	54
Conclusion	ts	P19		59,885764	59,885764	59,885764	59,885764	59,885764	59,885764	59,885764	59,885764	59,885764	59,885764	59,885764
	ts	P20		55,912353	55,912353	55,912353	55,912353	55,912353	55,912353	55,912353	55,912353	55,912353	55,912353	55,912353
Conclusion	ts	P22	54,5	54,5	54,5	54,5	54,5	54,5	54,5	54,5	54,5	54,5	54,5	54,5
	ts	P23	34,7											
Conclusion	ts	P24	51,5	51,547	51,547	51,547	51,547	51,547	51,547	51,547	51,547	51,547	51,547	51,547
	ts	P25		56,337037	56,337037	56,337037	56,337037	56,337037	56,337037	56,337037	56,337037	56,337037	56,337037	56,337037
Conclusion	ts	P26		59,014096	59,014096	59,014096	59,014096	59,014096	59,014096	59,014096	59,014096	59,014096	59,014096	59,014096
	ts	P27		56,7	56,653	56,653	56,653	56,653	56,653	56,653	56,653	56,653	56,653	56,653
Conclusion	ts	P28		54,0	54	54	54	54	54	54	54	54	54	54
	ts	P29		54,1	54,1	54,1	54,1	54,1	54,1	54,1	54,1	54,1	54,1	54,1
Conclusion	ts	P30		53,526	53,526	53,526	53,526	53,526	53,526	53,526	53,526	53,526	53,526	53,526
	ts	P31		54,256965	54,256965	54,256965	54,256965	54,256965	54,256965	54,256965	54,256965	54,256965	54,256965	54,256965
Conclusion	ts	P32		61,0	61	61	61	61	61	61	61	61	61	61

Evaluation of laboratory performance

- A non-satisfaction to one or more eliminatory criteria leads to fail the evaluation
- A non-satisfaction of the non-eliminatory criteria leads to remarks
- Laboratories with outlying results can receive advices based on the expertise of the laboratory organizing the proficiency test
 - ❑ possible sources of error on aberrant results (pipettes, washs, temperature, machines calibration...)
 - ❑ performance improvement tips

Edition of the report and
information of the
participants.

- An anonymized global report is prepared, it contains information's on the proficiency test process necessary to explain the performance of laboratories as well as the results and information provided by the participants. Depending on the nature of the results, these are graphically represented under curves, histograms, pie charts or other graphics as appropriate.
- The PT global report is distributed by email to all participants in a non-editable format <<Adobe PDF>>

Lessons learned from years of proficiency tests (2017-2025)

- CIRAD's-PT is organised annually simultaneously EURL-PPR and WOAHA/FAO ref lab
- A total of 52 participating laboratories in 2025
- Includes laboratories from Africa, EU member states, Eurasia, Middle East and sometimes kit producers
- Participating either in serology or molecular biology evaluation (RT PCR and/or real time RT PCR) or both

Lessons learned from years of proficiency tests (2017-2025)

Serology

- cELISA kit from IDvet is the most commonly used by laboratories
- Sometimes opportunities to compare with other tests available, or new tests developed by other laboratories
- When possible we purchase the test and run it in our laboratory

Serology - cELISA

➤ Comparison of cELISA kits: Ingenasa vs. IDvet (2017)

➤ Results from CIRAD

➤Results from CIRAD

Sample Number	IDvet Status	IDvet Expected Results	Ingenasa Status	Ingenasa Expected Results	Panels received by laboratories					
					Sample number	P1	P6	P9	P13	CIRAD
1	Positive	Positive	Negative	Negative	1	N	N	N	N	N
2	Positive	Positive	Negative	Negative	2	N	N	N	N	N
3	Positive	Positive	Negative	Negative	3	N	N	N	N	N
4	Positive	Positive/Doubtful	Negative	Negative	4	N	N	N	N	N
5	Negative	Doubtful/Negative	Negative	Negative	5	N	N	N	N	N
6	Positive	Positive	Positive	Positive	6	P	P	P	P	P
7	Positive	Positive	Positive	Positive	7	P	P	P	P	P
8	Positive	Positive	Positive	Positive	8	P	P	P	P	P
9	Positive	Positive	Positive	Positive	9	P	P	N°	P	P
10	Negative	Negative	Negative	Negative	10	N	N	N	N	N
11	Positive	Variable	Positive	Variable	11*	P	P	N°	N	N
C+	Positive	Positive	Positive	Positive	Average C+	P	P	P	P	P
C-	Negative	Negative	Negative	Negative	Average C-	N	N	N	N	N
MRI C+	Positive	/	Negative	/						

➤ All lab agreed in showing that Ingenasa not enough sensitive

Serology - cELISA

- Comparison of cELISA kits: Biostone vs. IDvet (2024/2025)
- Results from participant from the same country using Biostone kit

Panel	P48	P48 bis	Panel type
Kit used	AsurDx PPRv BioStone kit.	AsurDx PPRv BioStone kit	Expected results 2024
Status	Status	Status	Status
Nivac/Ctr 1/32	N	P	P
Nivac/Ctr 1/64	N	N	P
Nivac/Ctr 1/128	P	N	P
Nivac/Ctr 1/256	N	N	D/N
C8/C9-97 2024-1/2	P	P	P
C8/C9-97 2024-1/2	P	P	P
Negative serum	N	N	N
Negative serum	P	N	N
Negative serum	N	P	N

Samples	Expected results 2025	P54 AsurDx™ PPRV Antibody Test Kit
S96 1/2	P	P
S96 1/4	P	P
S96 1/8	P	P
C8/C9 1/2	P	P
C8/C9 1/2	P	P
Negative serum	N	N
Negative serum	N	N

- Difficult to conclude if the problem comes from the lab or from the kit, need more tests

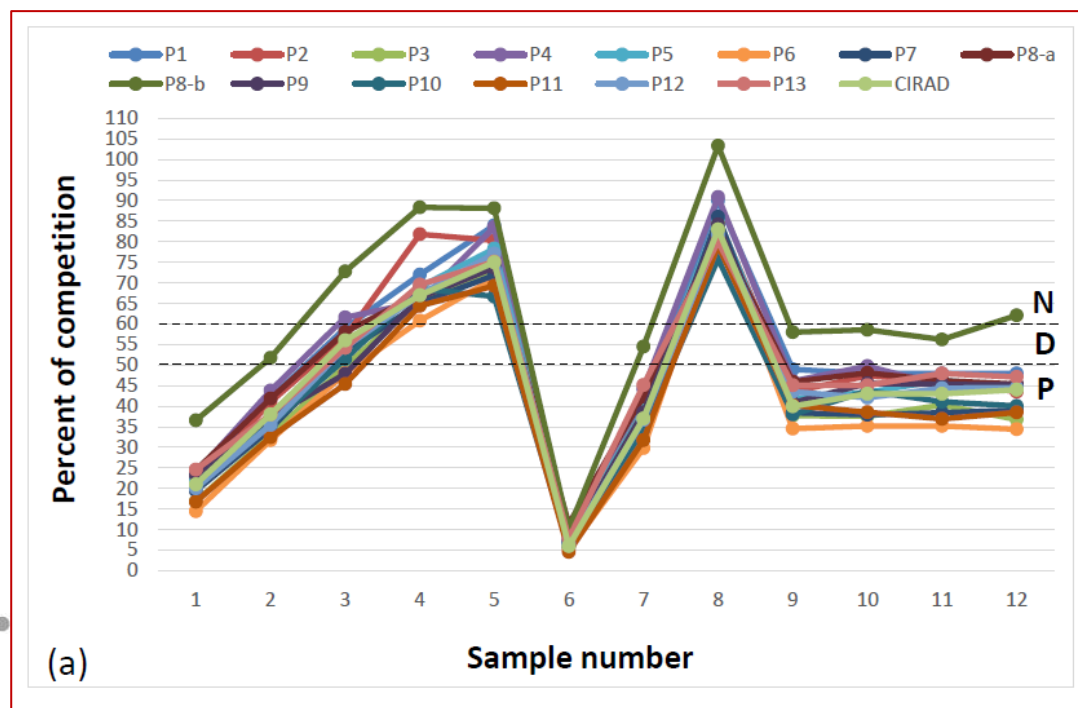
Serology – cELISA – typical issues

- Wrong interpretation of the results (not following instructions)
- Use of outdated kits
- Signs of issues with reliability of performance (lab conditions, material, operator)

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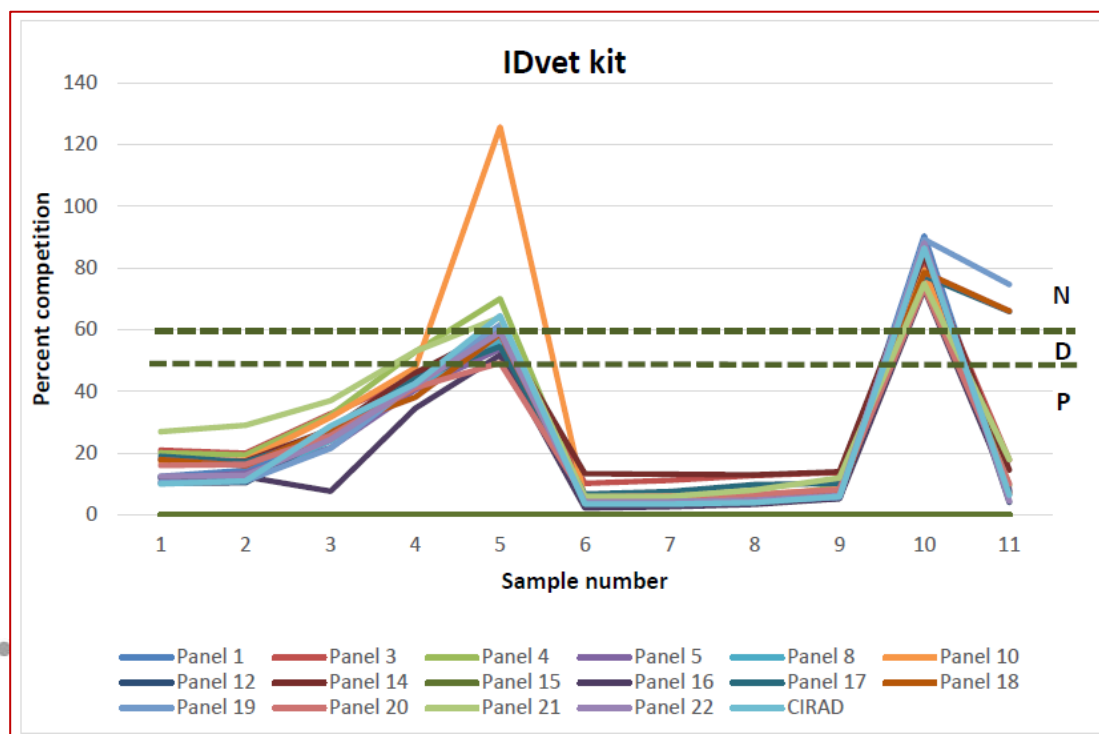
Issue with
lab conditions?
Pipettes?



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Issue with
Operator?

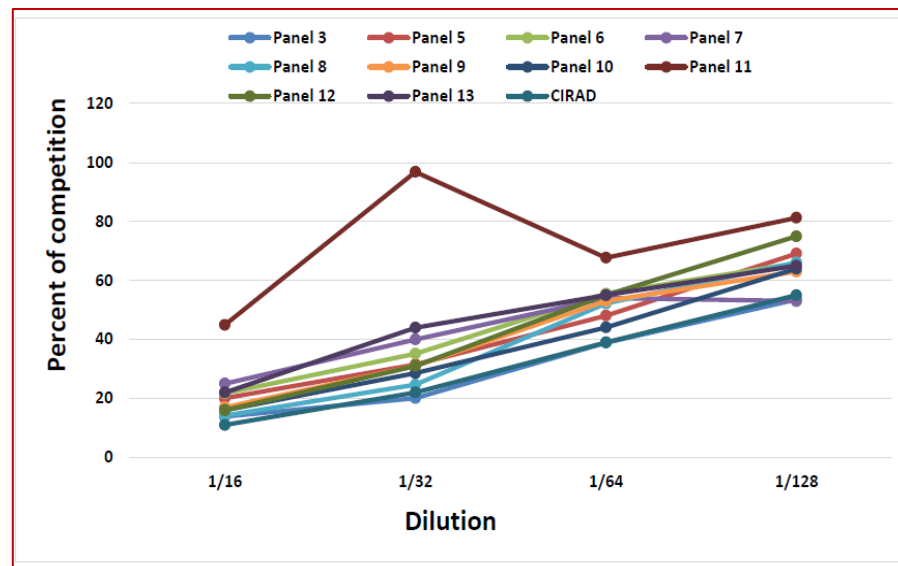
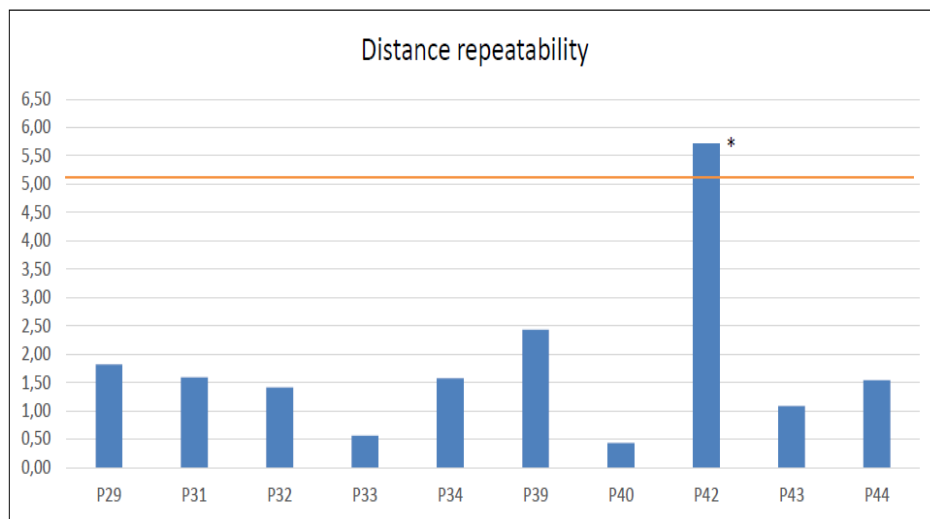


Serology – cELISA – typical issues

- Wrong interpretation of the results (not following instructions)
- Use of outdated kits
- Signs of issues with reliability of performance (lab conditions, material, operator)

Lack of repeatability / expected dilution curve

Issue with Operator? Pipettes?



Serology – cELISA – typical issues

2024 PPR-PT

Panels	P50	P51	P52	P53	P55	P56	P58	P59	P60	P61	P62	P63	P64	P65	P66	P67	P68	P69	P70	P71
IRM	/	44,56	/	46,21	/	/	/	/	31	/	/	/	/	/	/	/	16,90	8,39	/	/
IRM	/	48,01	/	44,23	/	/	/	/	33	/	/	/	/	/	/	/	/	/	/	/
IRM	/	/	/	41,57	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
IRM	/	/	/	49,08	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/

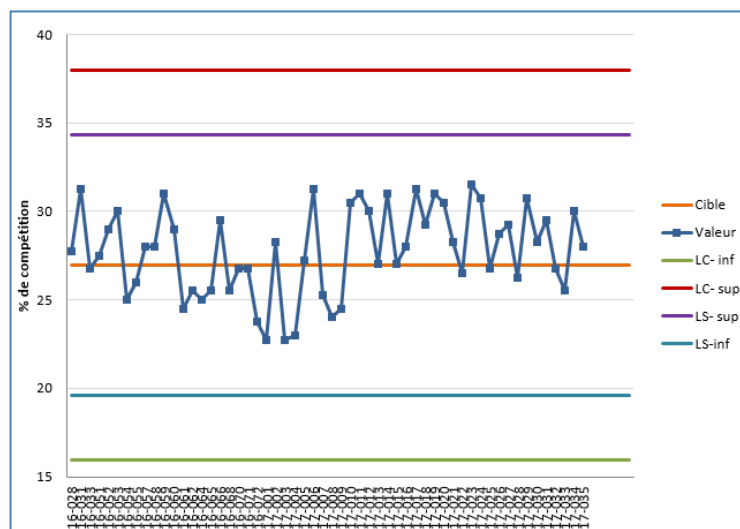
2025 PPR-PT

Panels	P1	P16	P29	P35	P56a
IRM 1	47,7	107,0	13,1	30,1	22,0
IRM 2	48,4	/	/	/	/
IRM 3	/	/	/	/	/
IRM 4	/	/	/	/	/

➤ IRM not well calibrated => not possible to monitor variations

Serology – cELISA – typical issues

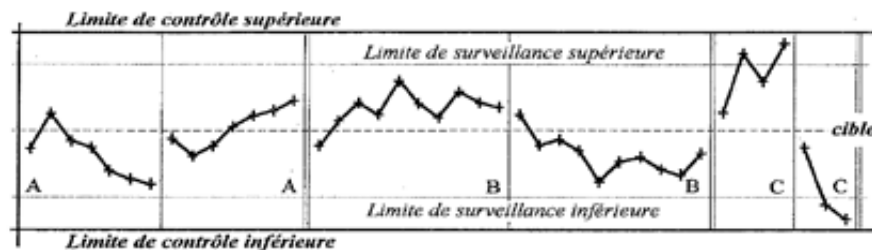
- One way to control for lab issues and validate results: setting up an internal reference material and a control chart



Control chart following trends in value of an Internal Reference Material

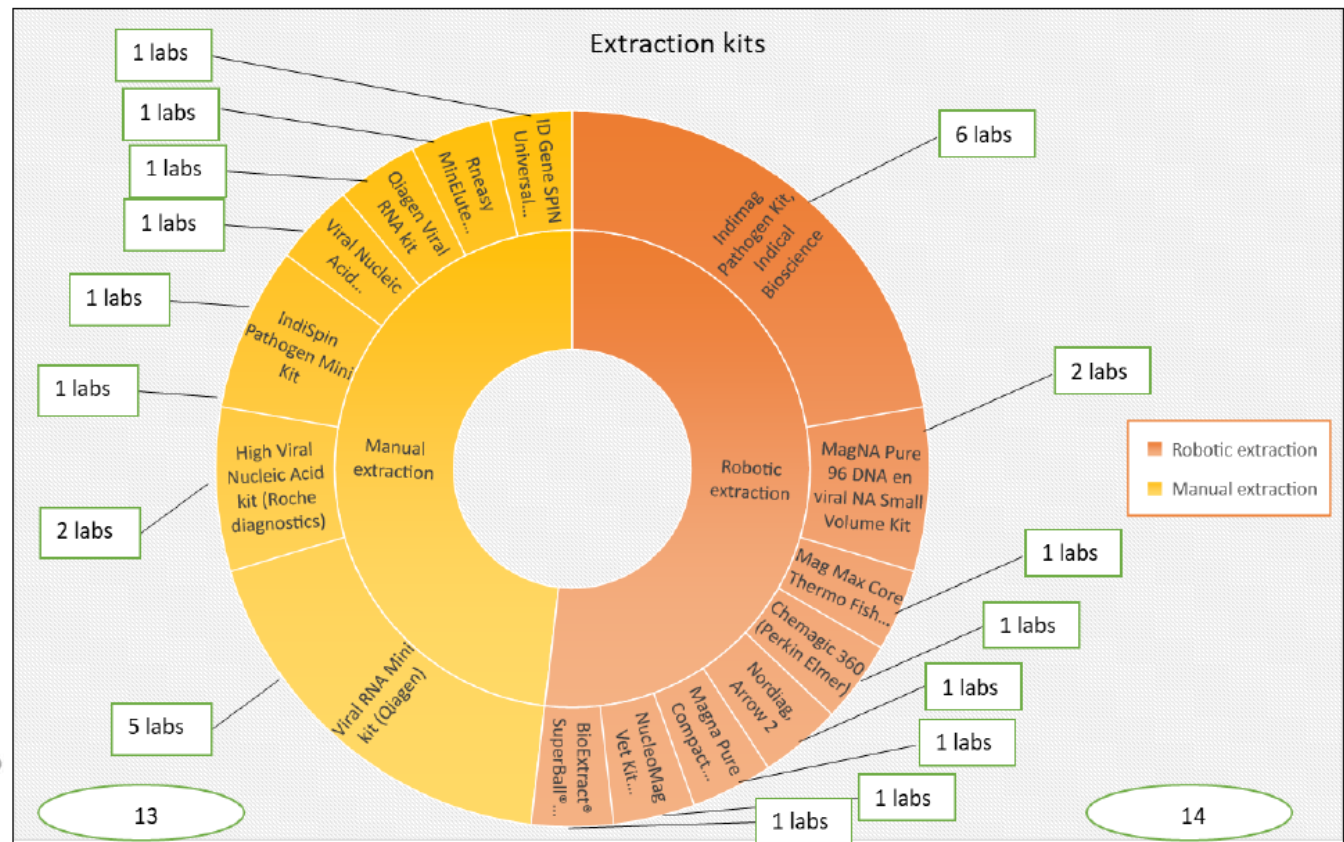
Limits of control of the chart set by multiple tests of IRM by multiple operators

Schewhart's chart



PCR – diversity of methods

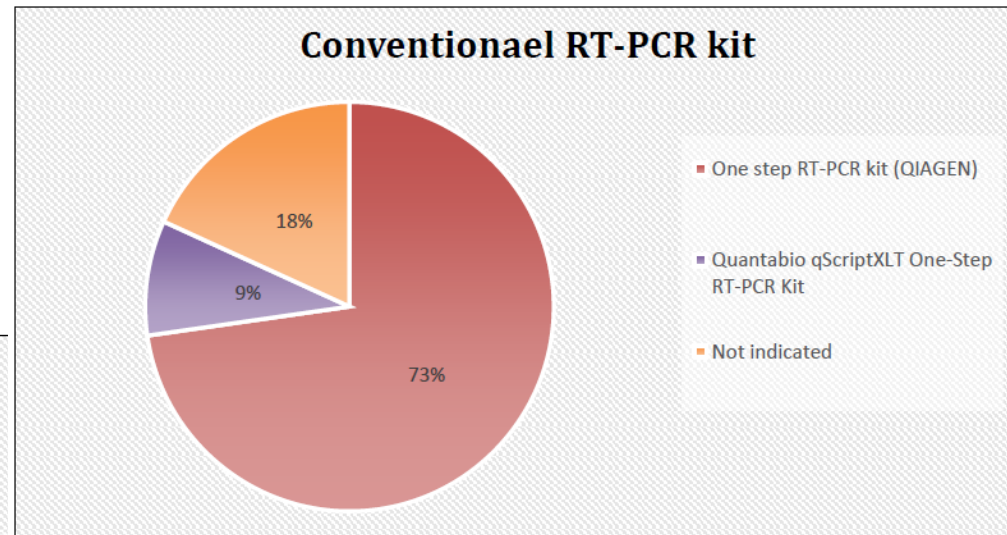
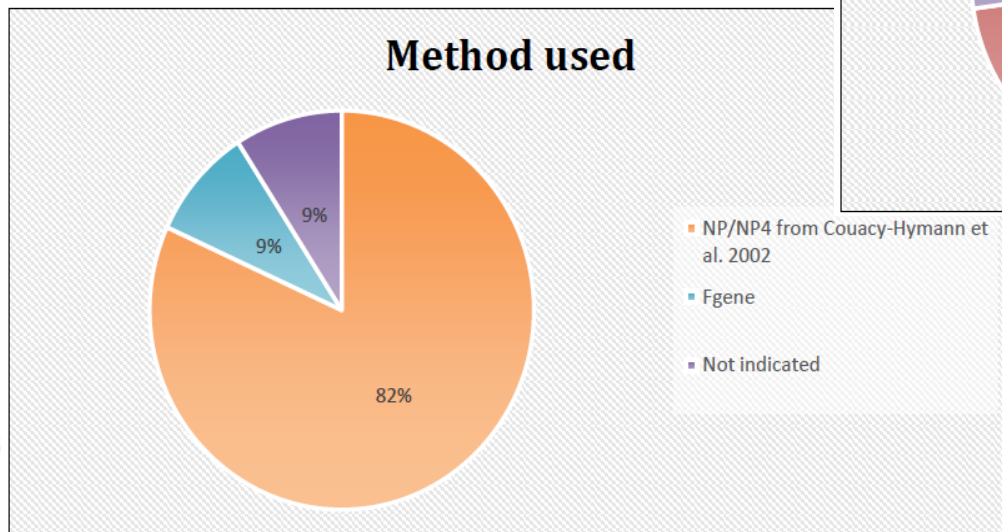
- Conventional and/or real-time RT PCR
- Conventional RT PCR often sole technique used by labs in Africa
- Conventional less sensitive than real-time RT PCR
- Many factors influencing results (extraction kit, PCR kit, quality of electrophoresis...) – more complex to analyse



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RT-PCR

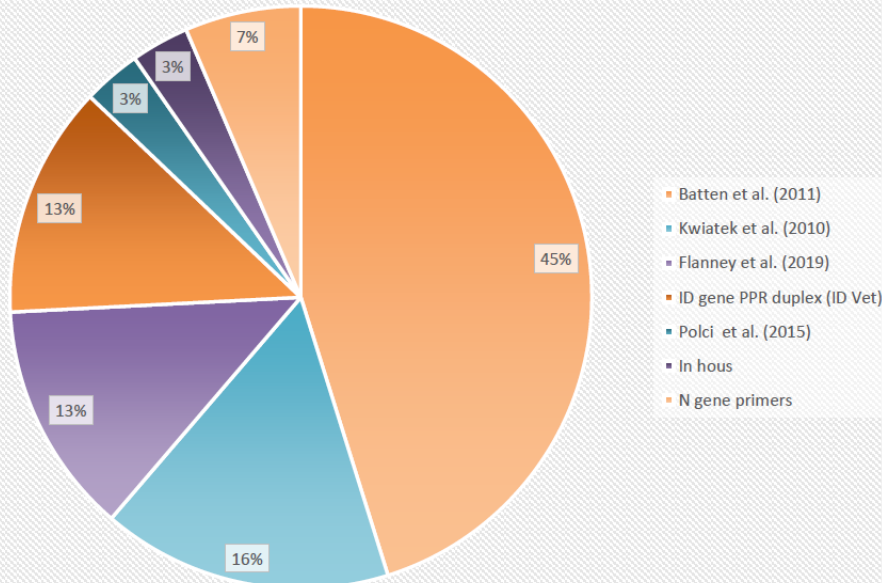


PCR – diversity of methods

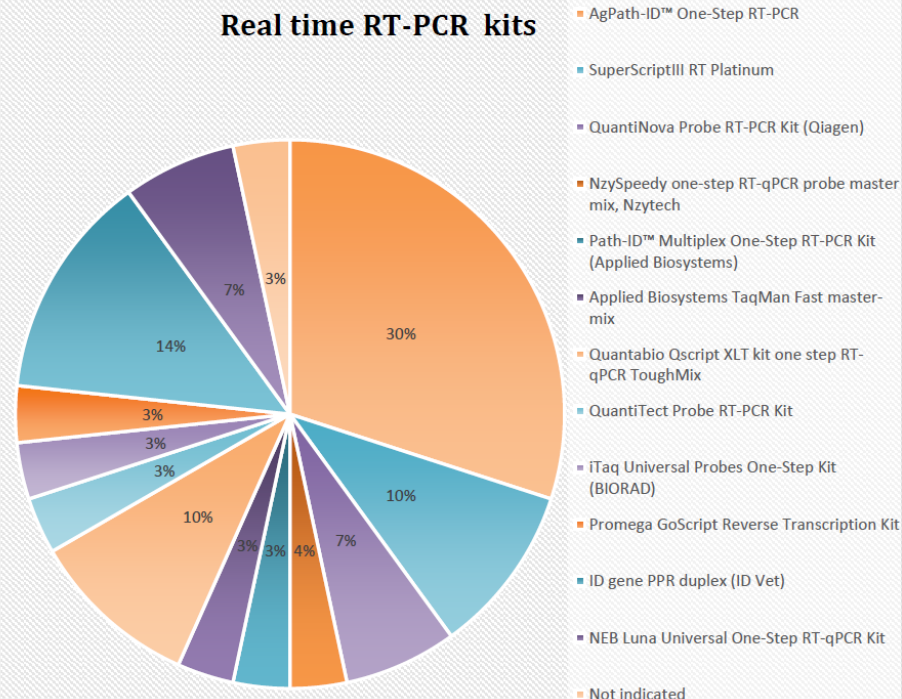
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Real-time RT-PCR

Method used



Real time RT-PCR kits



PCR

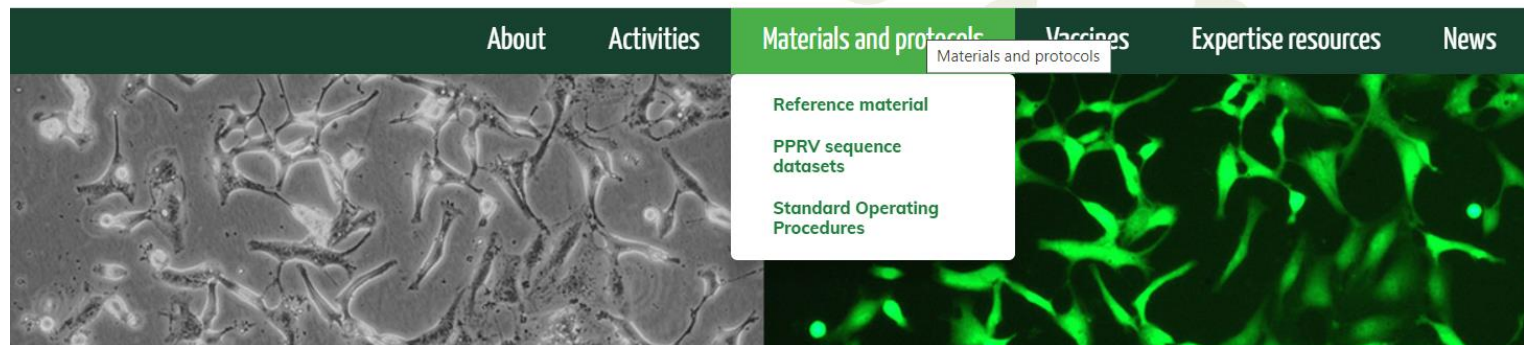
Our role:

- Identify methods clearly not fit for purpose
- Give all details to participating labs so they can improve on their protocol
- Give access to reference material to help validate methods
- Suggest to follow protocols validated by WOAHP ref labs (see website)



WOAH

Reference Laboratory
Network for PPR



RT-PCR – feedback from PT

Main issues encountered:

- No positive and/or negative controls used by multiple participants in the first years, now all participants include required controls
- Problems of specificity:
 - Some participants fail to detect some strains, except at strong concentration (Couacy-Hymann protocol)

Primers used	NP3/NP4											F gene
Panels	P2	P6	P7	P11	P19	P22	P25	P26	P32	P33	P34	P6
Virus	Status											
Morocco2008	P	P	P	P	P	P	P	P	P	P	P	P
Morocco2008	P	P	P	P	P	P	P	P	P	P	P	P
Morocco2008	P	P	P	P	P	P	P	P	P	P	P	P
Comoros 10 ⁻¹	P	P	P	N	P	P	P	P	WP	P	P	P
Comoros-10-2	P	P	P	N	P	P	P	WP	N	N	P	P
Comoros-10-3	P	P	P	N	P	P	P	N	N	N	P	WP
Nigeria75/1-10-2	P	P	P	P	P	P	P	P	P	P	P	P
Neg extr	N	ND	N	N	ND	ND	N	N	N	N	N	ND
Pos extr	P	ND	P	P	ND	ND	P	P	P	P	ND	ND
Neg PCR	N	N	N	N	ND	N	N	N	N	N	N	N
Pos PCR	P	P	P	P	ND	P	P	P	P	P	P	P

Real-time RT-PCR – feedback from PT

- Lack of sensitivity of some methods:
Kwiatek method and Bao method are not robust to detect strains of lineage III

Panel	P22	P5	P7	P24	P11	P35	P13	P9	P25-CIRAD	P26	P33	P3	P37-CIRAD	P17	P34	P8	P1	P10	P9	P25-CIRAD	P16	P28	P37-CIRAD	P8	P19	P1	P12	P31	P34	P32	P24	P2	P34	P28	P6	P20	P18	P30	
Method	Batten															Bao			Idvet					Kwiatek								Flannery			Polci	Inhouse	N gene		M gene
Sample	Ct																																						
Morocco08-10-1	17	17	18	17	17	21	18	22	18	27	17	15	18	17	17	21	19	16	19	15	24	20	15	16	14	19	15	21	16	19	18	19	18	18	15	19	17	20	
Morocco08-10-1	17	17	18	17	17	20	18	22	18	23	19	16	18	17	17	21	18	17	20	15	24	20	15	16	13	17	15	22	16	19	18	19	18	18	16	18	17	20	
Morocco08-10-1	17	17	18	17	17	19	19	22	18	21	18	14	18	17	16	21	18	17	20	15	25	19	15	16	14	18	14	21	16	19	17	19	18	18	15	19	16	20	
Comoros-10-1	21	20	21	22	21	22	22	26	21	22	29	18	21	20	21	No ct	No ct	No ct	24	19	28	23	18	no Ct	23	no Ct	18	32	27	23	22	22	22	24	23	27	20	34	
Comoros-10-2	24	23	24	25	25	25	26	29	24	29	No Ct	22	25	23	24	No ct	No ct	No ct	27	22	31	26	22	no Ct	25	no Ct	22	no Ct	30	No ct	26	27	26	28	27	28	24	no Ct	
Comoros-10-3	27	27	28	29	27	29	29	33	29	31	No Ct	24	28	27	27	No ct	No ct	No ct	31	26	36	30	27	no Ct	29	no Ct	25	no Ct	31	No ct	28	31	30	34	30	No CT	28	no Ct	
Nigeria75/1-10-2	21	22	22	22	21	24	23	26	23	28	23	19	22	22	21	29	27	24	25	21	29	24	21	21	18	22	19	25	20	24	23	24	23	23	20	22	21	29	
Neg extr	No Ct	No Ct	No Ct	No Ct	No Ct	No Ct	No Ct	No Ct	no ct	NR	No Ct	No Ct	No Ct	No Ct	No ct	No Ct	No Ct	No ct	No Ct	no ct	No Ct	No Ct	No Ct	No Ct	NR	No Ct	No Ct	No Ct	No ct	No ct	No Ct	No Ct	No ct	No Ct	NR	No CT	ND	no Ct	
Pos extr	19	ND	32	27	29	29	22	28	26	29	19	IC	23	ND	ND	28	27	30	25	25	ND	31	21	22	ND	27	27	29	ND	32	28	31	ND	30	NR	29	ND	ND	
Neg PCR	No Ct	No Ct	No Ct	ND	No Ct	No Ct	No Ct	No Ct	no ct	NR	No Ct	No Ct	No Ct	No Ct	No ct	No Ct	No Ct	No ct	No Ct	no ct	No Ct	No Ct	No Ct	No Ct	NR	No Ct	No Ct	ND	No ct	No ct	ND	No Ct	No Ct	No Ct	No Ct	No CT	ND	No Ct	
Pos PCR	19	20	28	ND	30	33	27	27	22	28	22	23	21	26	31	32	32	29	24	18	34	30	18	25	20	32	27	ND	31	26	ND	31	33	33	26	27	ND	ND	

Real-time RT-PCR – feedback from PT

- Lack of sensitivity of some methods

Low sensitivity of Kwiatek method and Bao method confirmed by an in silico study of Flannery et al. 2019 (Pirbright Institute)

PPRV region	Authors	Sensitivity	Specificity	FICS performance
F-gene	Flannery et al 2019	98.0	100	4.6
N-gene	Batten et al., 2011	90.5	100	5.7
N-gene	Polci et al., 2015	90.6	100	3.0
N-gene	Van Rijn et al., 2018	89.7	100	4.6
N-gene	Kwiatek et al., 2010	58.6	100	4.8
N-gene	Bao et al., 2008	46.9	100	5.0
N-gene	Adombi et al., 2011	13.1	100	3.3

Journal of Virological Methods. 274:113735.

Real-time RT-PCR – feedback from PT

- Lack of sensitivity of some kits

Maybe similar issue with Vetmax and Genesig kits, or some in-house method

	BATTEN					ID gene PPR		Vetmax PPRV kit	Genesig kit for PPRV	
	P12	P28	P32	P45	P48	P24	P27	P31	P23	P40
Virus	qualitative results									
Comoros pure	P	P	P	P	P	P	P	P	P	P
Comoros-1	P	P	P	P	P	P	P	P	P	P
Comoros-2	P	P	P	P	P	P	P	P	P	IND
Comoros-3	P	P	P	P	P	P	P	N	N	IND
Comoros-2	P	P	P	P	P	P	P	P	P	IND
Goat negative serum	N	N	N	N	N	N	N	N	N	N
Goat negative serum	N	N	N	N	N	N	N	N	N	N
Morocco2008	P	P	P	P	P	P	P	P	P	P
Decoy	P	P	P	N	P	P	P	N	P	IND
Neg RNA extr	N	N	N	N	N	N	N	N	N	ND
Pos RNA extr	P	P	P	P	P	P	P	P	P	ND

P; positive, N; negative, ND; not done, IND; indetermined

Primers used	Idvet		Batten		Genesig LPPRV	In house		
Panels	P38	CIRAD	P38	CIRAD	P44	P33	P35	P36
Sample name	Staus							
Nigeria75-10 ⁻¹	P	P	P	P	P	P	P	P
Nigeria75-10 ⁻²	P	P	P	P	P	P	P	P
Nigeria75-10 ⁻³	P	P	P	P	P	P	P	P
Nigeria75-10 ⁻⁴	P	P	P	P	P	P	N	N
Morocco-10 ⁻²	P	P	P	P	P	P	P	P
Ethiopia94	P	P	P	P	P	P	P	P
Uninoculated swab	N	N	N	N	N	N	N	N
Decoy*	P	P	P	P	N	P	N	N
Neg PCR	N	N	N	N	ND	N	N	N
Neg extr	N	N	N	N	ND	N	N	N
Pos extr	P	P	P	P	ND	P	P	P

* Decoy sample, P; positive, N; negative, D; ND; not done.

General conclusion

- Proficiency test is one of the most important tool for a laboratory to ensure that diagnostic methods are well applied and fit for purpose
- Comparison of results with other participating labs offer opportunities to continuously improve performance of the lab
- PT is key to fully validate a new method, or flag methods with major issues (participation to PT is obligatory for ISO17025)
- The WOAHA ref lab network for PPR propose multiple activities and reference material to help improving performance in PT.
- One issue: participation fees often required (future funding options to be discussed)



WOAH

Reference Laboratory
Network for PPR

<https://www.ppr-labs-oie-network.org/>

WEBINAR – Organization of Proficiency Tests under ISO17043

- Notional PT, molecular Biology method, NRL from Romania
- Regional PT, serology method on Camel sera, ADAFSA UAE



WOAH

Reference Laboratory
Network for PPR

WOAH Reference Laboratory
for peste des petits ruminants

Reference Centre



World Organisation
for Animal Health
Founded as OIE



WEBINAR – Harmonisation of PPR diagnostic practices through proficiency tests

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Network for PPR

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Thank you for attention



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