



# PRRS XR Ab ELISA

Overview global field sample results





# Introduction:

## *The BioChek PRRS XR ELISA*

- ✓ The novel assay offers excellent sensitivity, specificity and reproducibility.
- ✓ Dynamic range that is linear over low, medium and high titres of antibody.
- ✓ The features differentiating the PRRS XR kit from others kits in the market are:
  - 1) the Extended Dynamic Range for effective health and vaccination evaluation.
  - 2) the Extended Detection Range due to the affinity to antibodies against PRRSV type II.



# Guideline for interpretation PRRS XR test outcomes

No vaccination		BioChek PRRS XR ELISA (S/P and titer)		Vaccination	
Not detectable	Negative	< 0,5	< 850	Negative	Not detectable
Old infection (or a very recent one*)	Low	0.5	850	Low	Vaccination response with No or MODERATE antibody boosting due to field virus contact
		1	2300		
Recent-old infection*	Moderate	1.5	3700	Moderate	
		2	5000		
		3	8000		
Recent infection*	High	3.5	9000	High*	
		4	10,000		
	Very high	4.5	11,000	Very high*	Vaccination response with antibody boosting due to field virus contact
		5	12,000		
		≥ 5.5	≥ 13000		

\*Piglets/finishers

→ Clinical symptoms present and other PRDC infections excluded: likely PRRS  
 Suspected PRRS clinical symptoms: high probability of PRRS (Check: cross sectional profile/evt. necropsy+histology/or paired sampling)

\*Sows

→ Titers ≥ 3.0 / 8000 indicates recent fieldvirus contacts /infections. Do eventual PCR and aborted/weak/dead born piglets



# Field sample results confirm

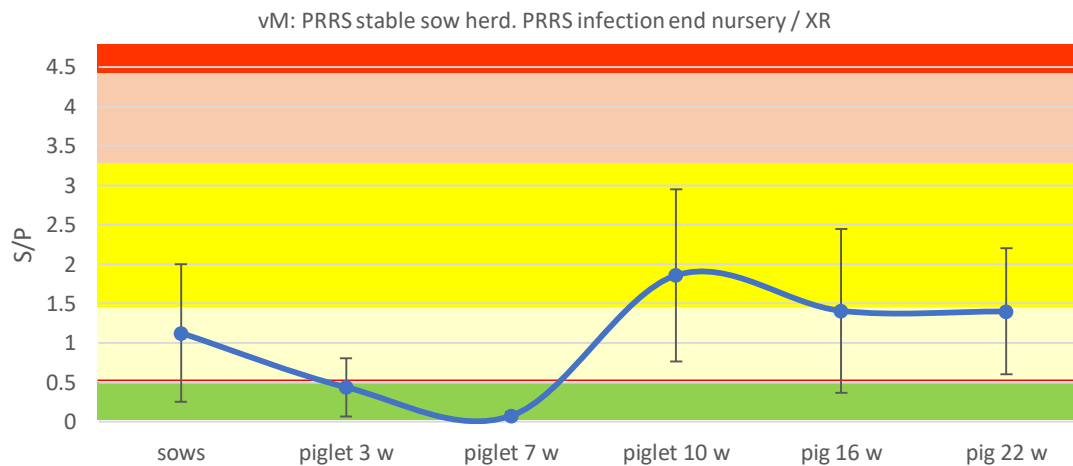
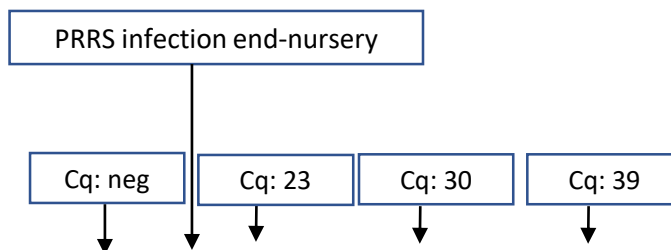
1. Early detection of active PRRS infections and PRRS vaccination response
2. Clear indication of infection- and vaccination moments.
3. Monitor PRRS status (high specificity and sensitivity needed).
4. Detection of both PRRS genotype I (EU) and Genotype II (US)



Early detection of active PRRS infection including indication of moment of infection.



*The true status is confirmed by PCR testing and typing*



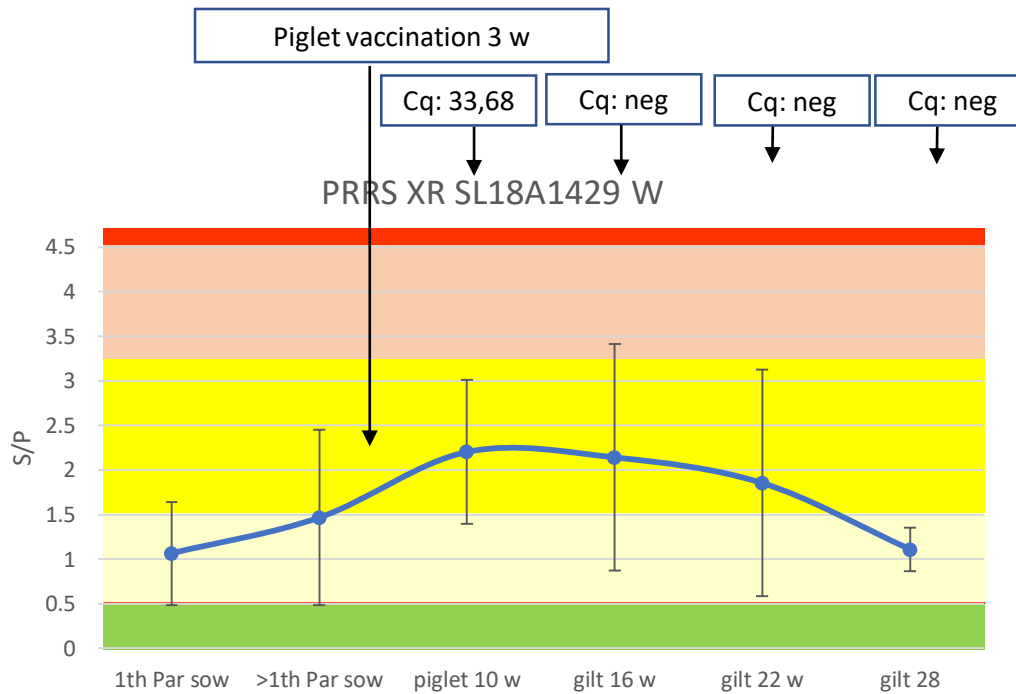
Field infection detected end nursery and a PRRS stable sow herd/farm (no serological evidence of infection young piglets).

Rapid serological response after infection.

# Early detection of PRRS vaccination including indication of vaccination moment.



*The true status is confirmed by PCR testing and typing*



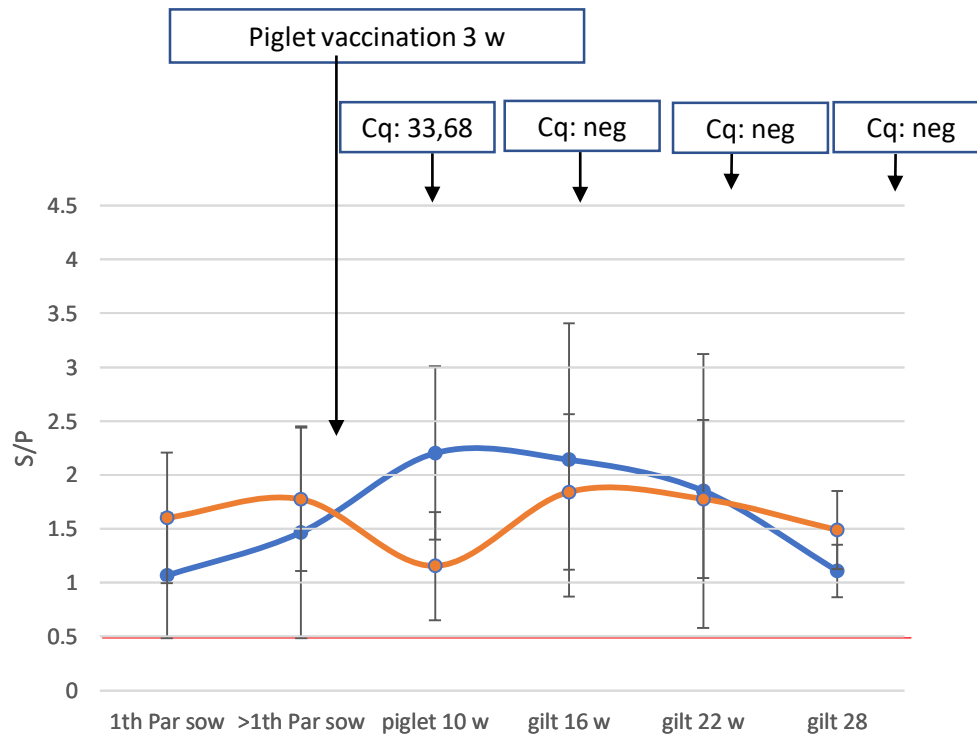
Detection of vaccination. No later field infection.

Rapid response after vaccination and further decline of antibodies later on.

# Early detection of PRRS vaccination including indication of vaccination moment.



## Comparison with other commercial PRRS ELISA



Detection of vaccination. No later field infection.

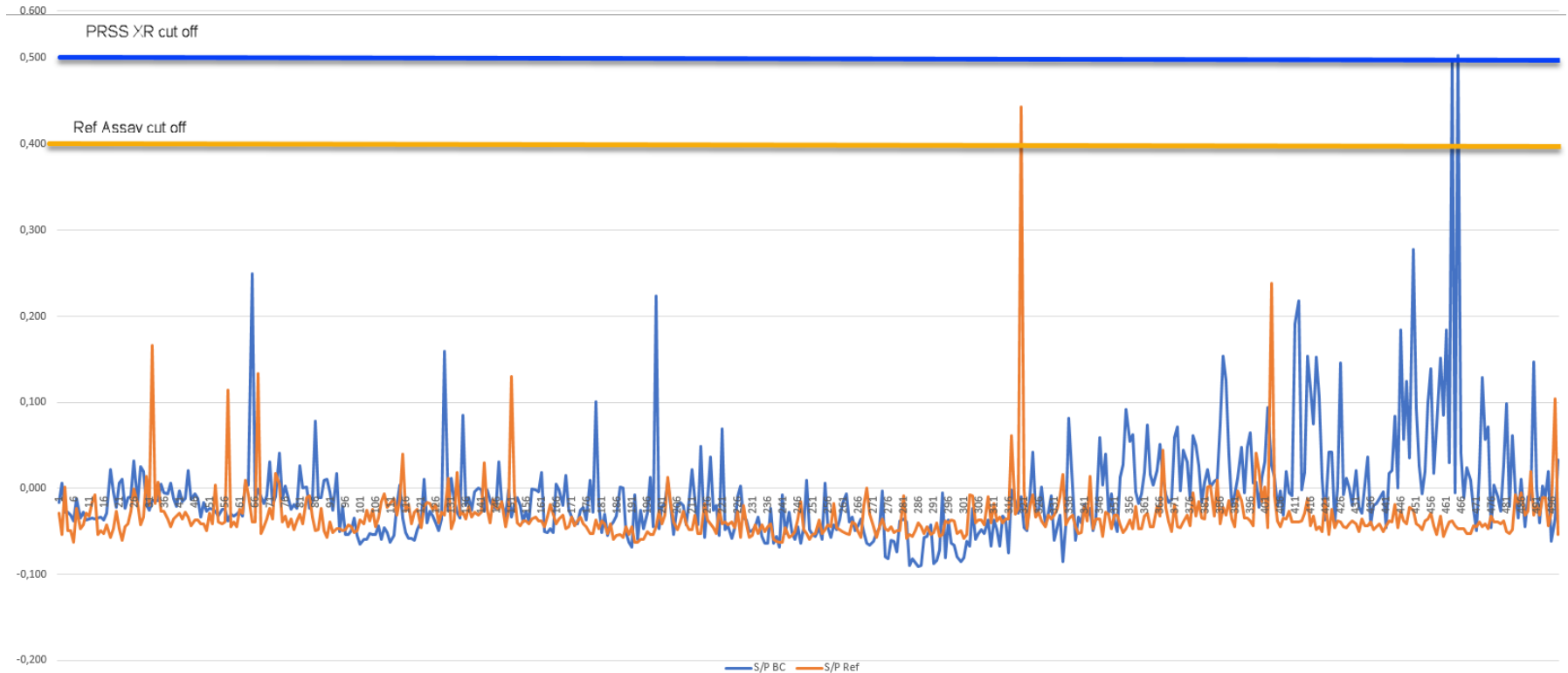
BioChek PRRS XR ELISA (blue) compared to another PRRS ELISA (orange): late and lower response of other commercial PRRS ELISA.



# Monitor PRRS status

## Specificity: PRRS XR— Iowa State

498 mixed negative swine samples tested on BioChek PRRS XR and Reference Assay  
Testing and samples IOWA State 2018



	PRRS-XR	Reference Assay
Negative Collection	496/498 = 99.6%	497/498 = 99.8%
Mean SP	-0.007	-0.032





# Monitor PRRS status

## Specificity Russian SPF samples

*600 samples from various Russian SPF farms*

*Samples of various production groups: sows, Gilts, piglets, finishers*

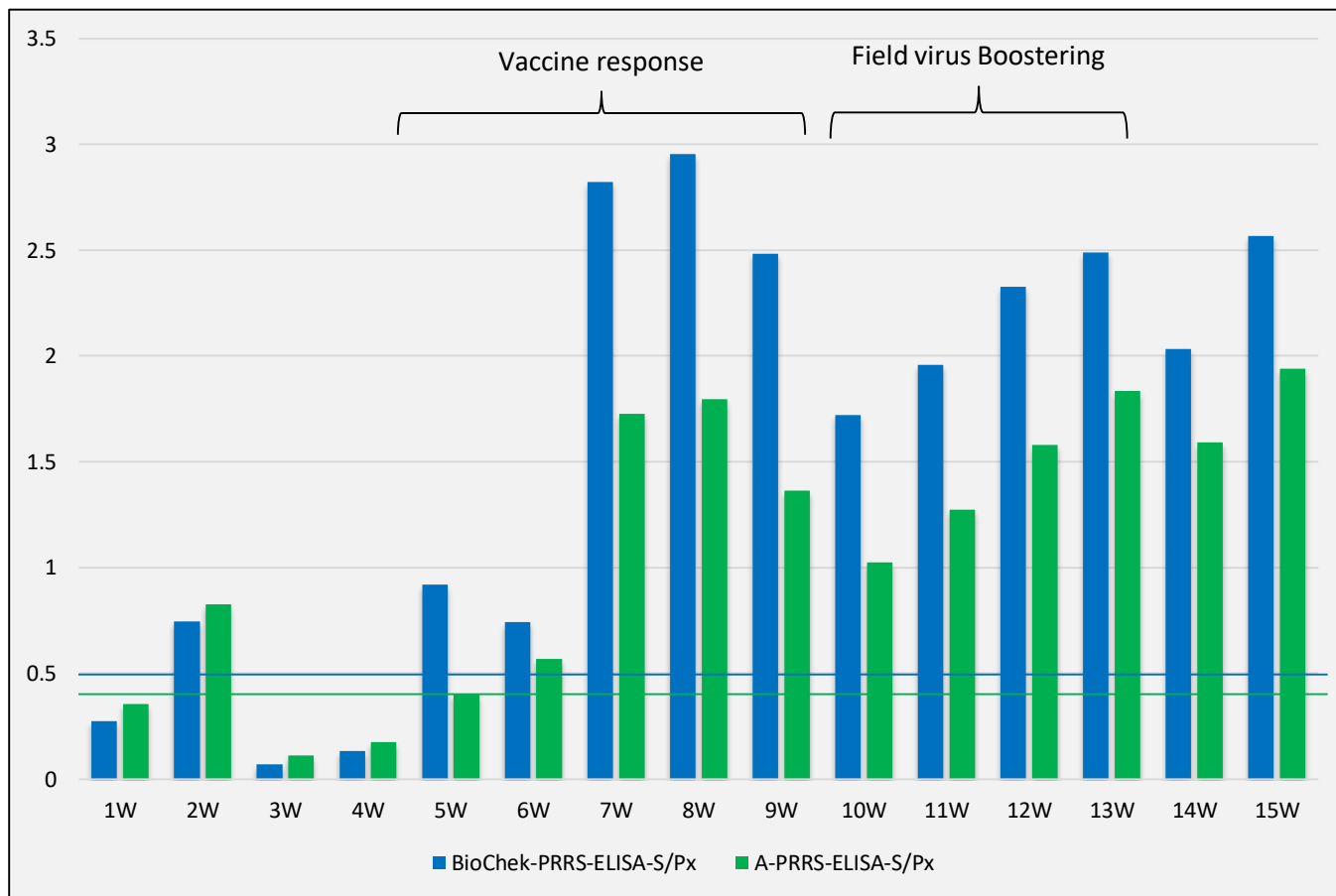
	PRRS XR Ab ELISA	Specificity
Negative	598	<b>99,7 %</b>
Positive (range pos.)	2 (0,505 / 0,563)	0.3 %



# Detection of PRRS Genotype II vaccination and infection

河南某集团子场1  
2019-3-16

PRRS Vaccination:  
Sow 3次/year  
piglet 2nd week



Fast response BioChek PRRS XR ELISA and broader titer range than a compared PRRS ELISA

# Conclusions

## Global field sample results confirm the added value of the BioChek PRRS XR Ab ELISA

- ✓ The PRRS-XR has an extended dynamic range compared to the other assays which makes infection- and vaccination evaluation easier.
- ✓ The PRRS-XR detects the Type II ( US) PRRS infections and vaccination at the same level (titer range) as Type I (EU) infections and vaccination
- ✓ Specificity  $\geq 99.6\%$



# PRRS XR details

- ✓ Catalogue Number: SK112.
- ✓ Added to BioChek II Software.



# PRRS XR

- ✓ 5 plates per kit-strip format.
- ✓ Color coded reagents.
- ✓ Test protocol: 30-30-15.
- ✓ Shelf life: 1 year.
- ✓ Reference control.





Antibody



DNA

# Contact

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