



GF-TADs update, China

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1. Abstract

In response to the imminent threat posed by transboundary animal diseases, China has diligently implemented a comprehensive suite of prevention and control measures. Here are four typical cases:

1. Withdraw of FMD Asia-1 vaccination;
2. Initiation of H7N9 vaccination;
3. Biosafety and biosecurity management for ASF;
4. PPR surveillance and eradication plan.

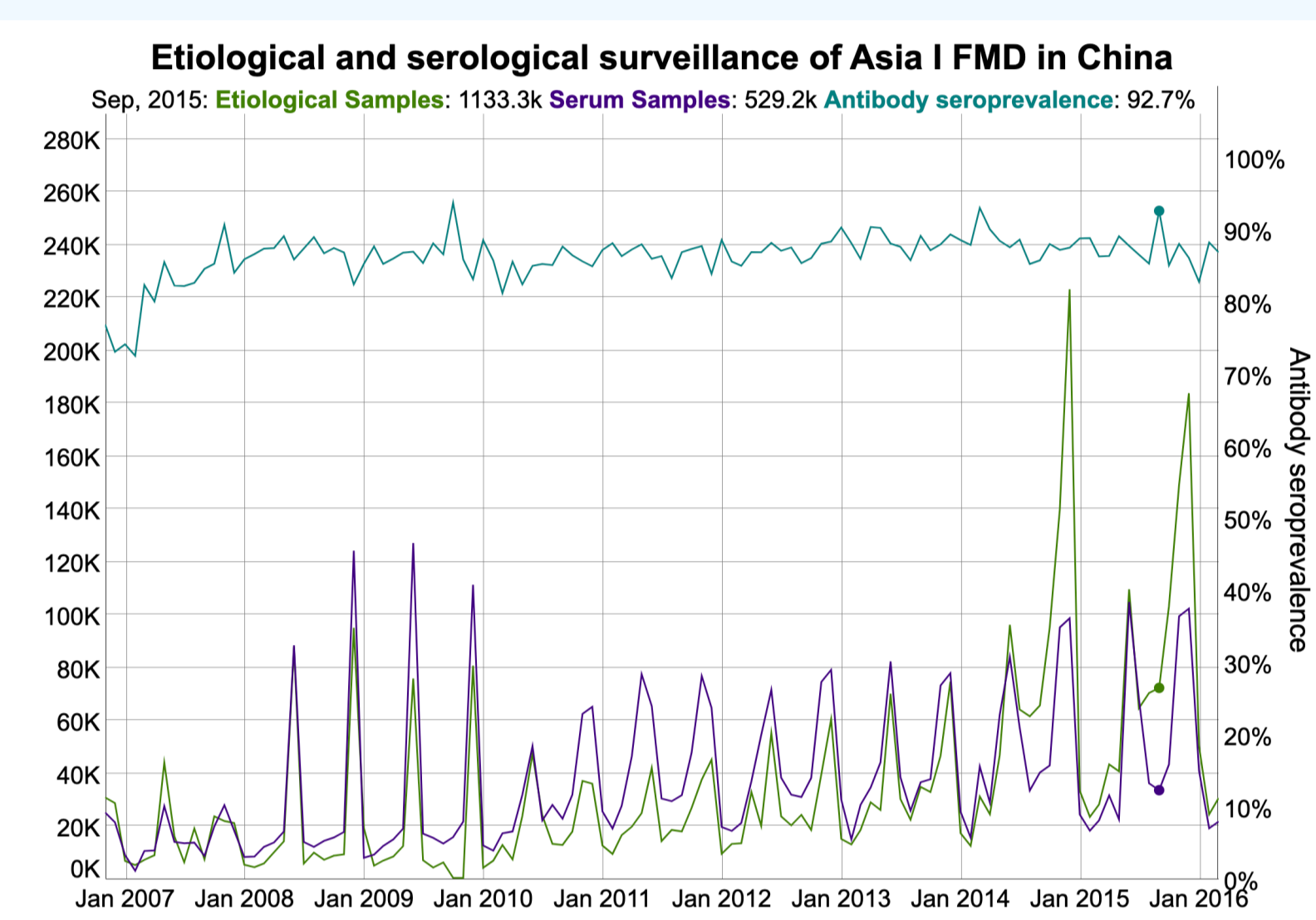
2. Introduction

China, as a prominent livestock country and substantial consumer of animal products, attaches the utmost importance to the animal health. In our endeavors to prevent and control transboundary animal diseases, we consistently employ a systematic, comprehensive risk management approach.

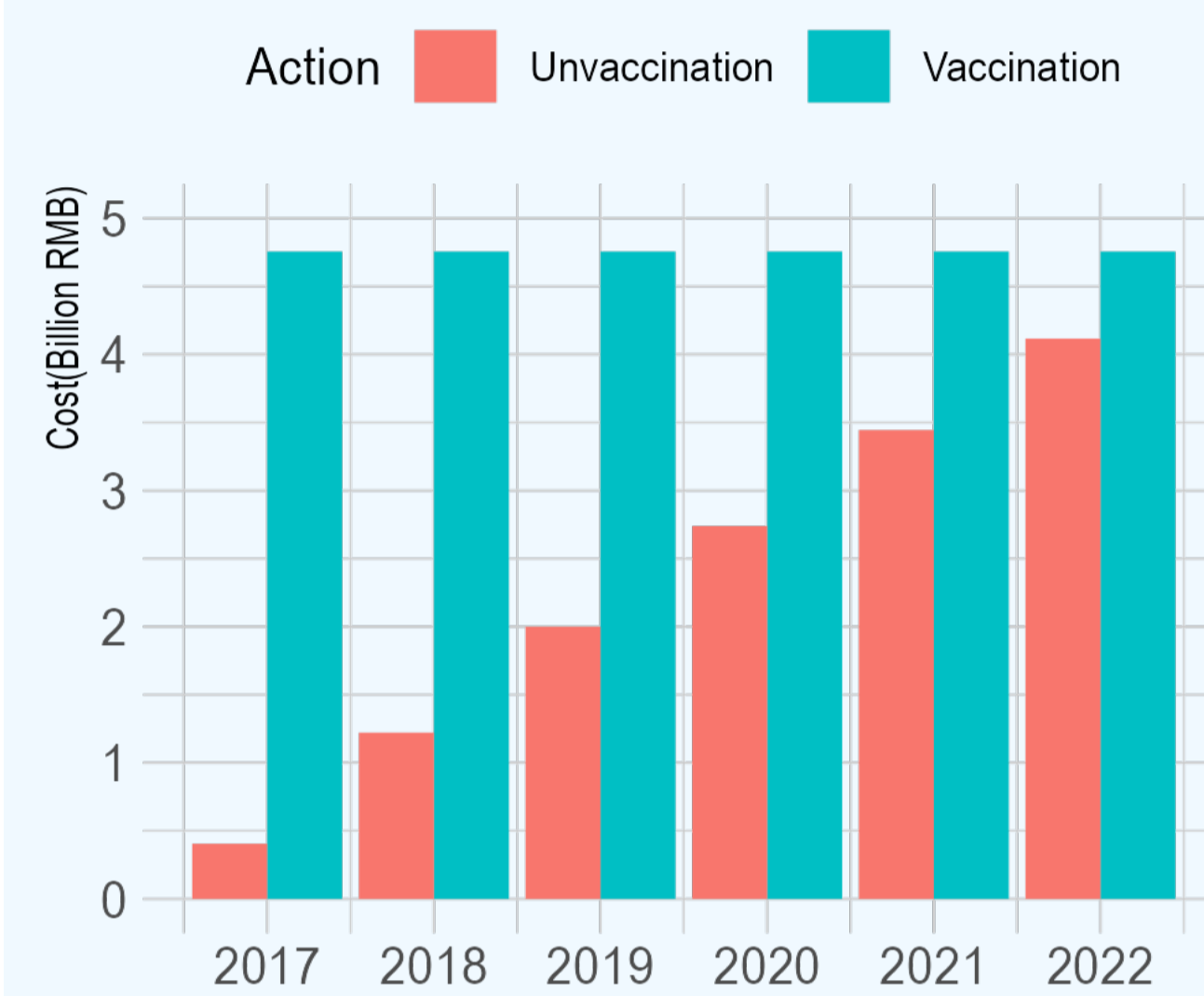
China has thoughtfully constructed a robust legal framework, well-established veterinary institutions, and a series of contingency plans. Tailored to the unique nation circumstances, targeted strategies for each individual animal disease were crafted. Furthermore, the control measures are subject to dynamic adjustments in response to the change of the disease epidemiological situation, ensuring their continued efficacy.

3. Activities

Assessment on Withdrawal of FMD Aisa-1 Vaccination



Etiological and serological surveillance of Asia I FMD in China, 2006 - 2016



Comparison of total basic costs, 2017 - 2022

In 2016, the assessment showed that :

- From 2010 to 2015, the mathematical expectation of the individual prevalence of FMD Aisa-1 was less than 0.01% at the confidence level of 99.99%;
- The mathematical expectation of the individual prevalence of FMD Aisa-1 in 2014-2015 was lower than 0.5% at the confidence level of 99.99%;
- Computer simulation showed that the probability of the occurrence of FMD Aisa-1 was on the same order of magnitude as that of withdrawing from vaccination ;
- Withdrawing from compulsory vaccination can greatly save the cost of epidemic prevention, and the earlier the better ;
- There was a risk of outbreak after withdrawing from compulsory vaccination, but the loss of epidemic disease was lower than the cost saved by withdrawing from vaccination.

On January 2, 2018, the Ministry of Agriculture announced a nationwide suspension of vaccination against FMD Aisa-1 from July 1, 2018.

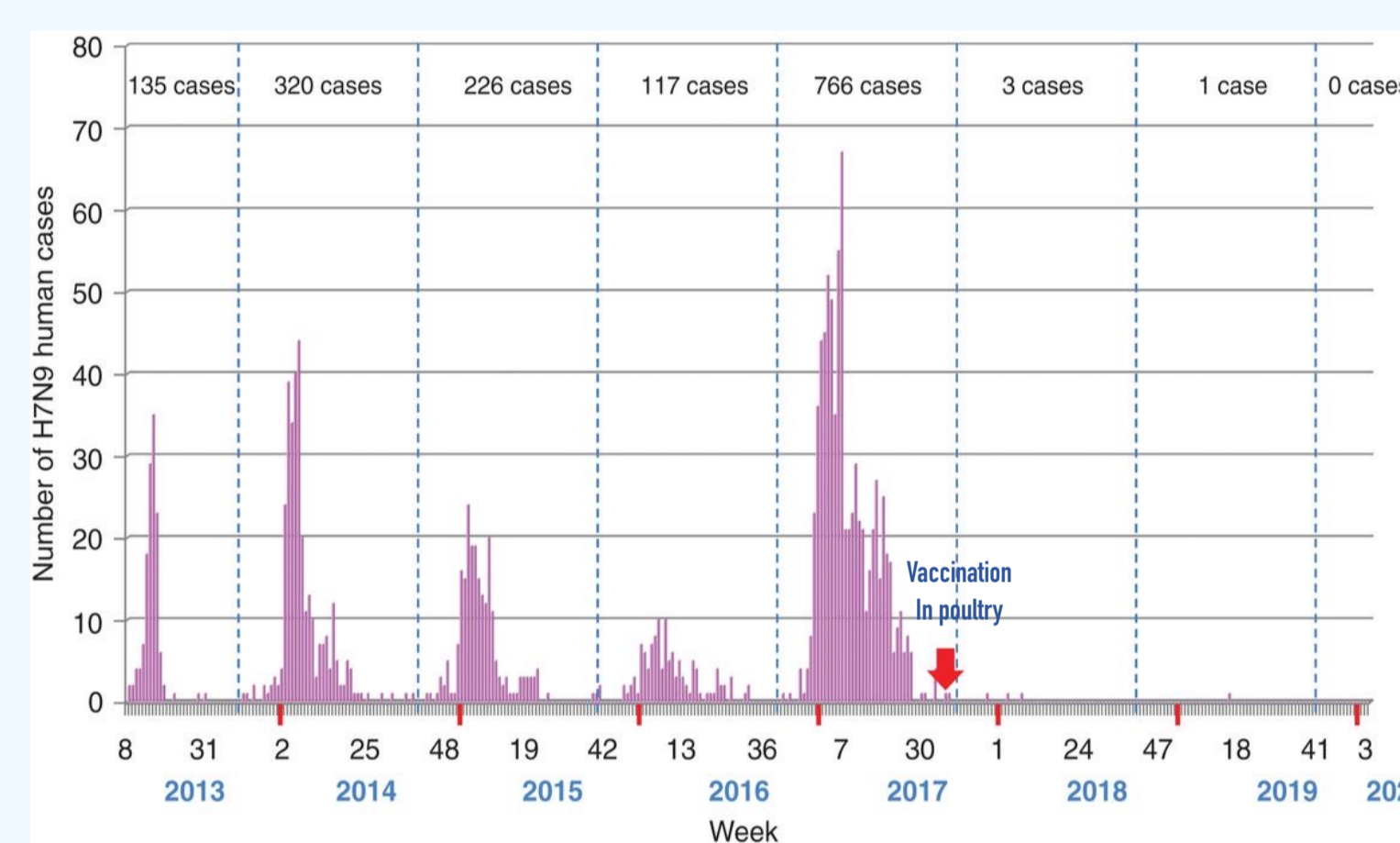
Assessment on Initiation of H7N9 Vaccination in Poultry

Loss in Poultry Production	¥ 13,775,716,667
Burden of Disease in Human	¥ 116,831,707
Direct Medical Cost in Human	¥ 114,183,477
Cost of Prevention and Control in Poultry	Surveillance ¥ 59,140,452
	Emergency Response ¥ 141,100,000
Cost of Disease	¥ 14,206,972,302

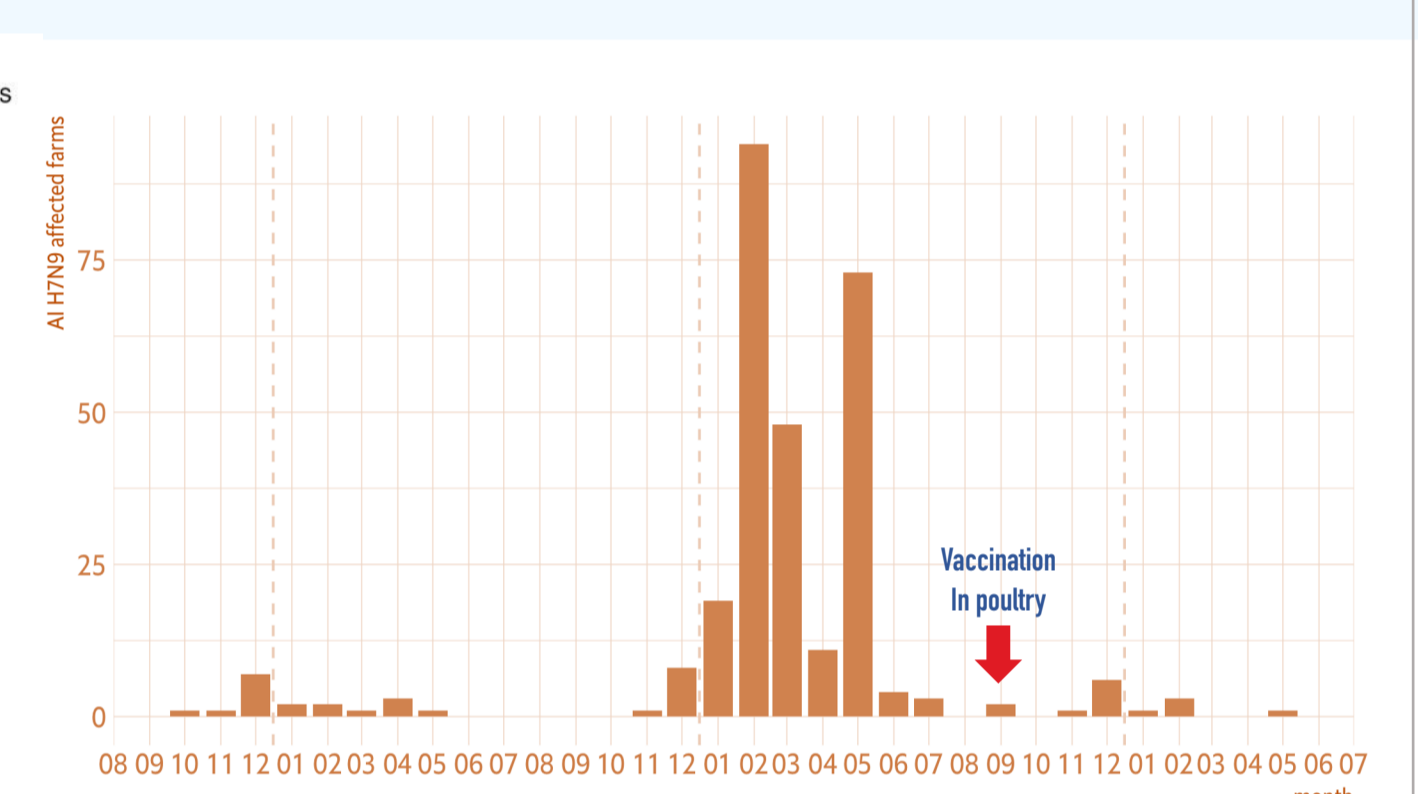
Epidemic costs of H7N9 outbreaks during the winter and spring of 2016-2017



The attitudes of farmers and grass-roots veterinarians to vaccination



Epidemiological curves of human infection with H7N9 influenza virus (doi: 10.1101/cshperspect.a038349 chenhuailan@caas.cn)



Changes in the number of positive fields of H7N9 avian influenza surveillance, 2015 - 2018

The net profit of H7N9 immunization policy was 22 billion RMB, and the benefit-cost ratio was 22.37.

Biosafety and Biosecurity Management for ASF



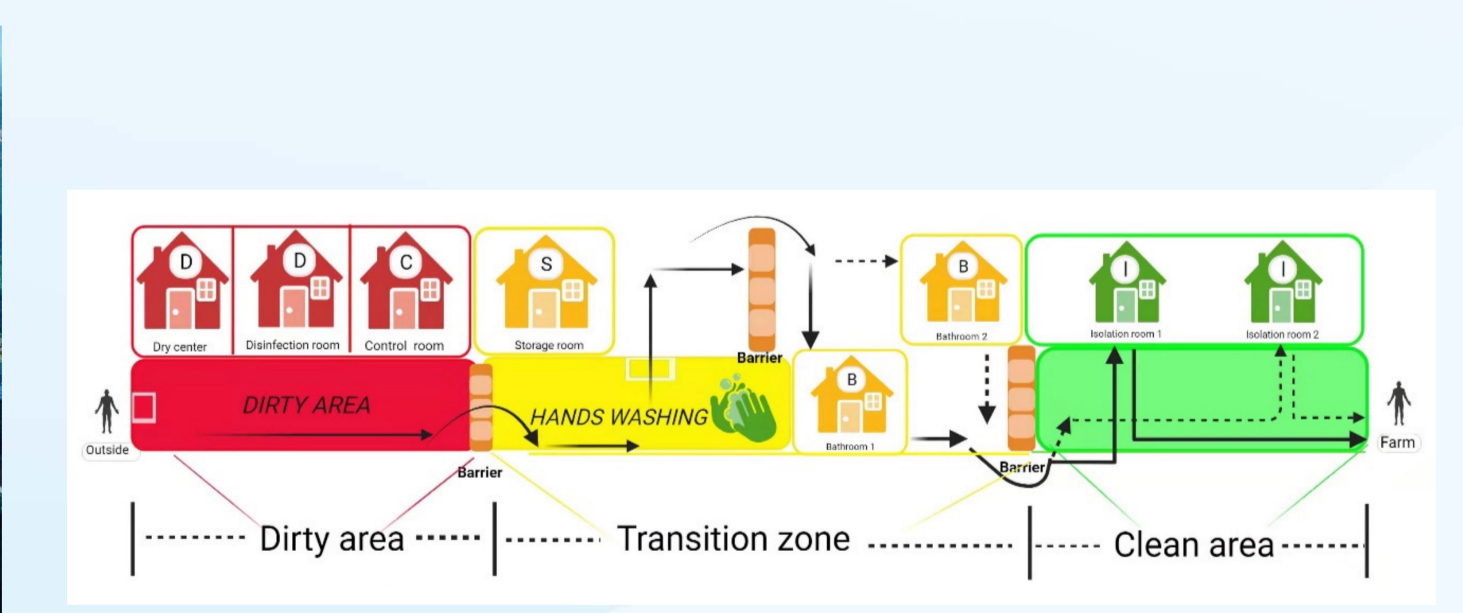
Zoning management for ASF control



ASF-free Compartmentalization, 216 pig farms were approved



Clustered multi-floor intelligent pig farm



Biosecurity and biosafety measures on pig farms (doi: 10.3390/v13122552, jxchen@scau.edu.cn)

China's pig industry is exploring biosafety and biosecurity measures against African swine fever, which has been proved to be feasible.

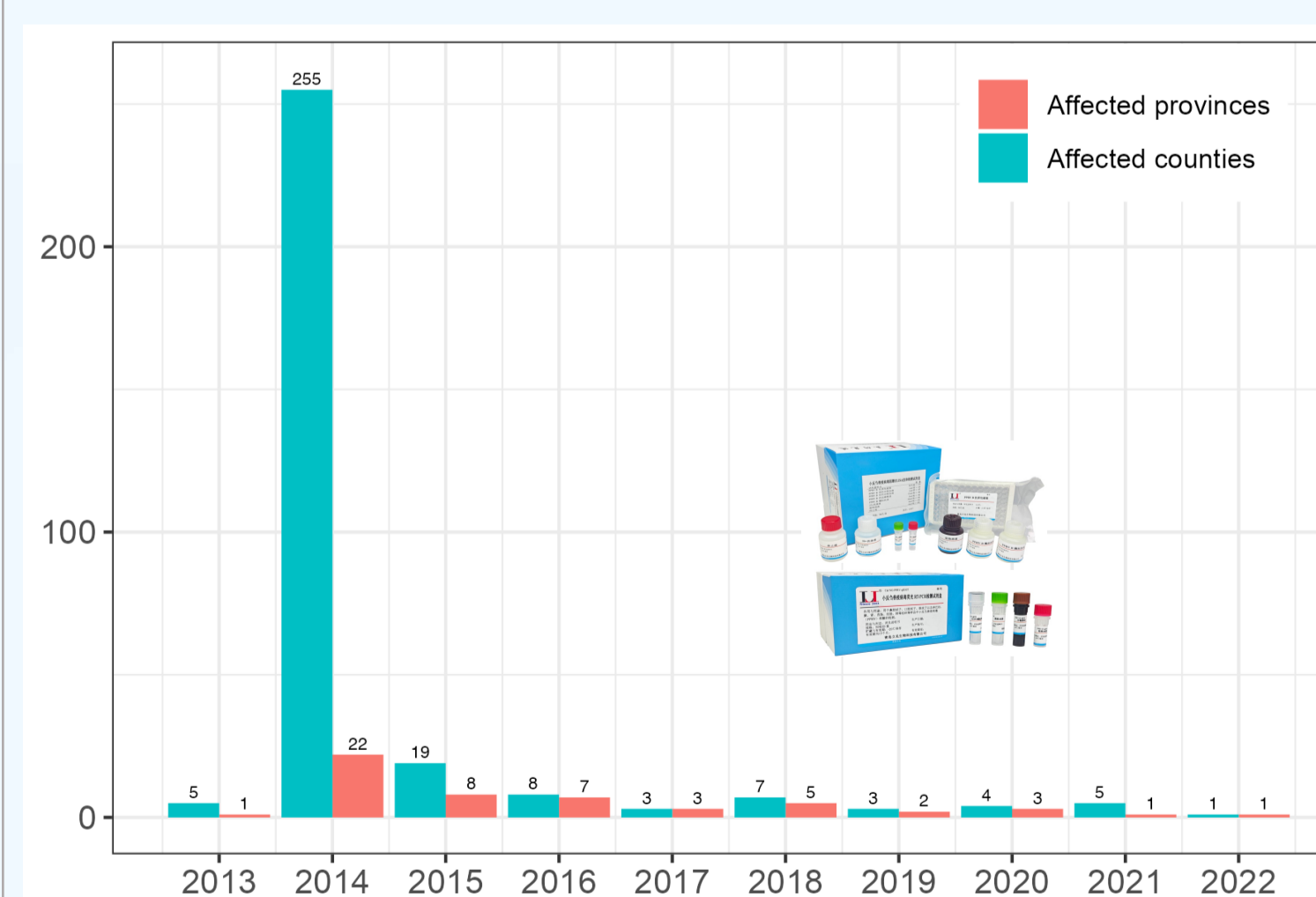
PPR Surveillance and Eradication Plan



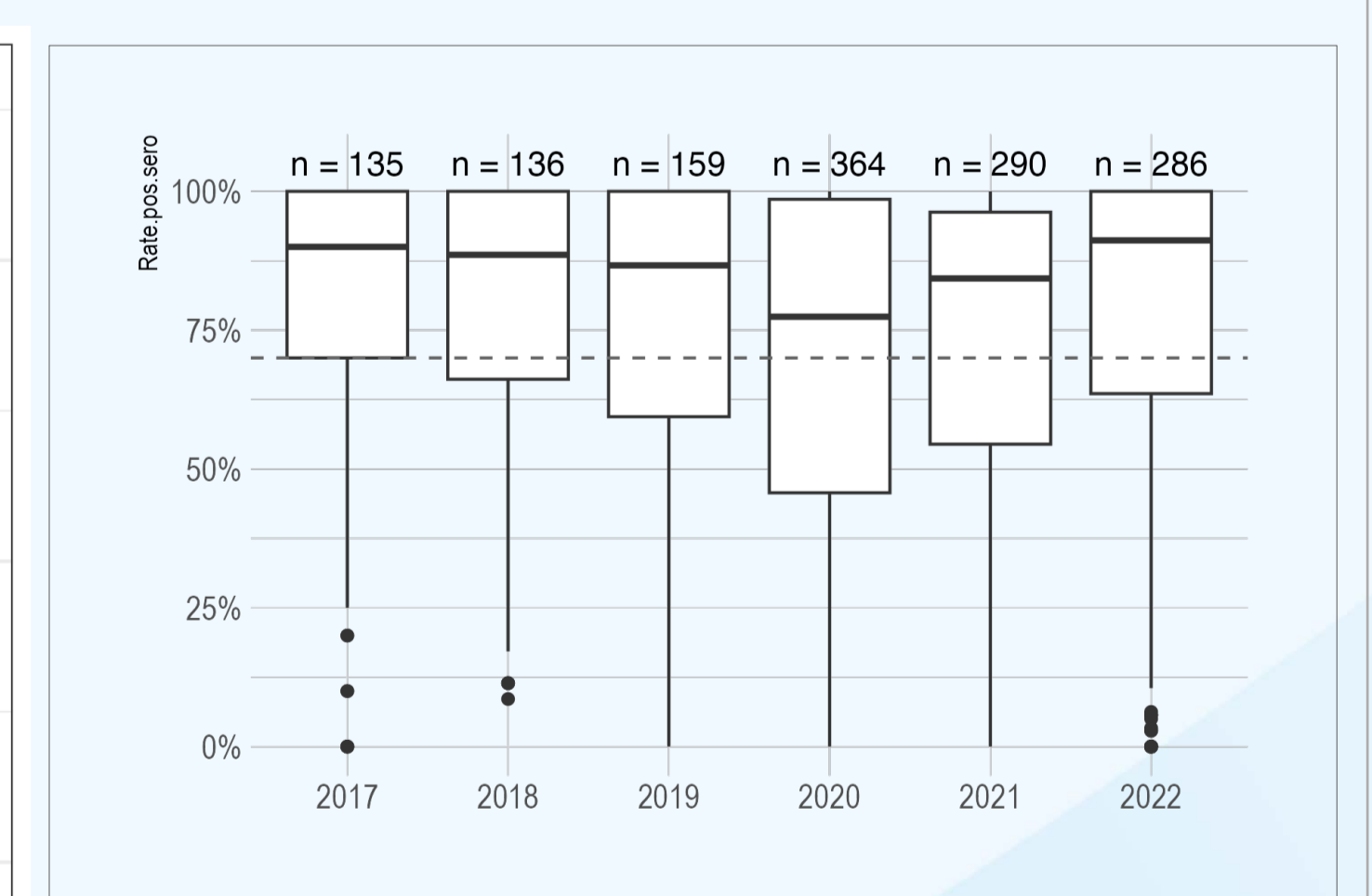
PPR vaccination campaign



Samples collection in a vaccinated goat farm



PPR confirmed events in China since 2013



PPR Post-vaccination sero-monitoring from 2017 to 2022

PPR is under control in China, only few sporadic outbreaks in these years, many provinces have been PPRV-free with vaccination policy.

4. Conclusion

Transboundary animal diseases exhibit remarkable diversity, pose significant threats to food safety, and persistently present risks. In the sphere of disease prevention and control, it is imperative to address both universal challenges and unique circumstances. Only through the adoption of progressive and targeted measures can we ensure the high-quality development of the livestock industry in an economically efficient manner.