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# Gilt introduction on Danish PRRSV-positive farms

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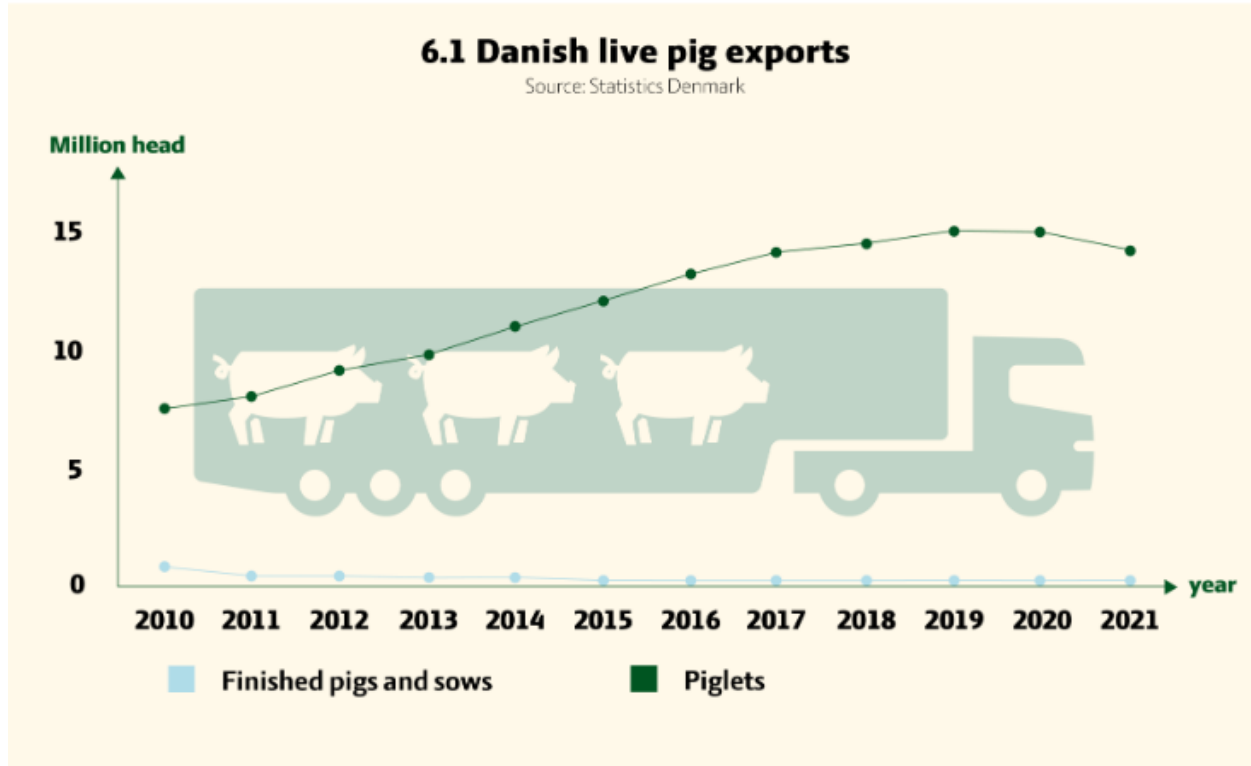
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# Danish pig production 2021

- 1 million sows → 33 million pigs
  - 17.9 live-born pigs per litter
  - 34 weaned pigs per sow per year
  - Finisher feed conversion: 2.66 feed units/kg



# Danish pig production 2021



## 33 million pigs produced

- 18.5 million slaughtered in Denmark
- 14.2 million weaners exported
- 0.3 million slaughter pigs exported
- NO IMPORT OF PIGS

# PRRS in Denmark

- PRRSV type 1 was diagnosed the first time in 1992
  - MLV PRRS vaccine type 2 was used from 1996
- 
- PRRS is part of the Specific Pathogen Free declaration system
  - 58% of Danish sow herds are declared seronegative for PRRSV (in 2022)
  - Boar stations and nucleus herds are seronegative for PRRS (monthly test)

# National PRRS control plan 2022

- Denmark has developed a PRRS control plan to reduce the number of seropositive pig farms
- Cases suspected for PRRS disease must be reported to the authorities
- All farms must declare status with respect to PRRS antibodies by the end of 2022
- PRRSV positive farms are registered by the authorities – to meet demands from export countries

## STRATEGY FOR THE REDUCTION OF PORCINE REPRODUCTIVE AND RESPIRATORY SYNDROME (PRRS) IN PIGS IN DENMARK

# In the press

**PIG PROGRESS** Pigs ▾ Health/Nutrition ▾ Markets

## Denmark: New PRRS strain emerged

16-11-2019 | Piglets | Pigs | News

[f](#) [t](#) [e](#) [i](#) [s](#)



The Danish pig industry was faced with a new challenge this summer. The pictured farm was not affected. Photo: Henk Riswick

**A new PRRS strain emerged in the Danish pig sector this summer. In total about 35 Danish swine farms were hit. The damage is especially substantial on swine farms where vaccinating for PRRS was not commonplace.**

**PIG PROGRESS** Pigs ▾ Health/Nutrition ▾ Markets

## Action plan developed against PRRS in Denmark

09-06 | Health | News

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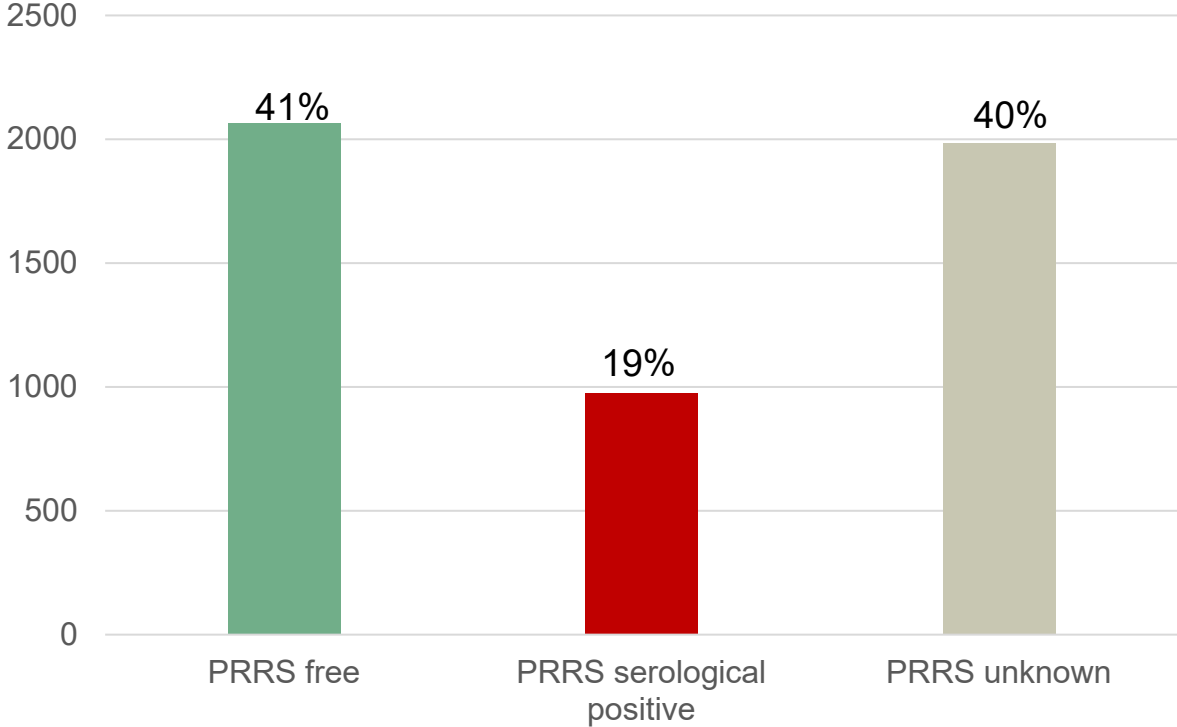



Photo: Mads Armgaard, Danish Agriculture & Food Council

# Declaration of PRRSV antibodies in Danish herds



Danish Pig herds, November 2022



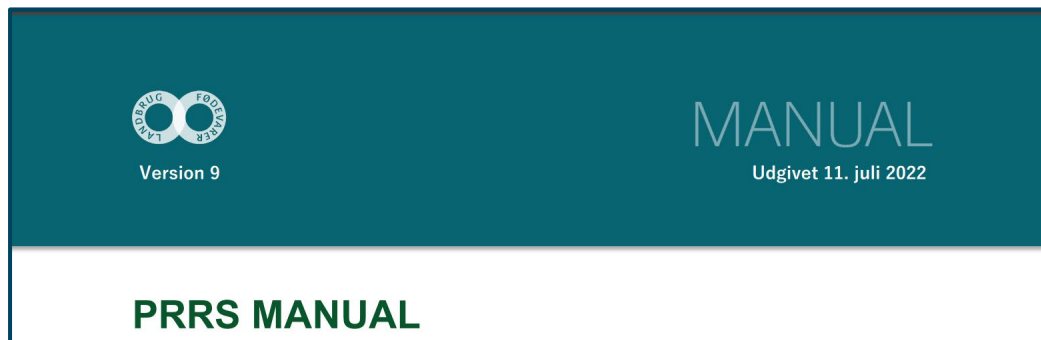
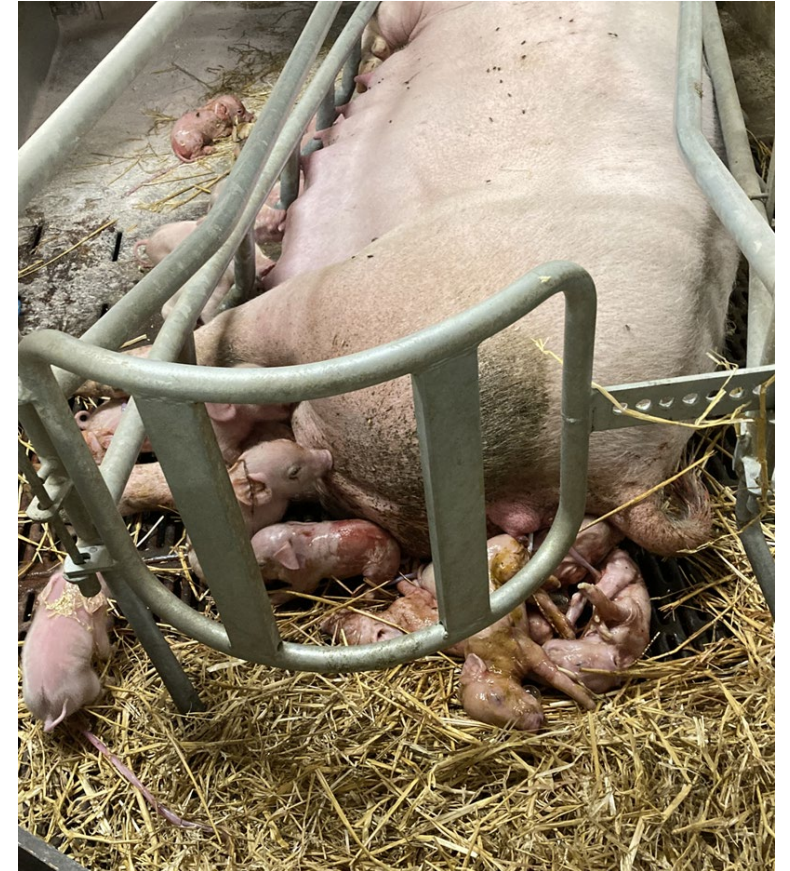


**Gilt introduction on 18 Danish  
PRRSV-positive farms**

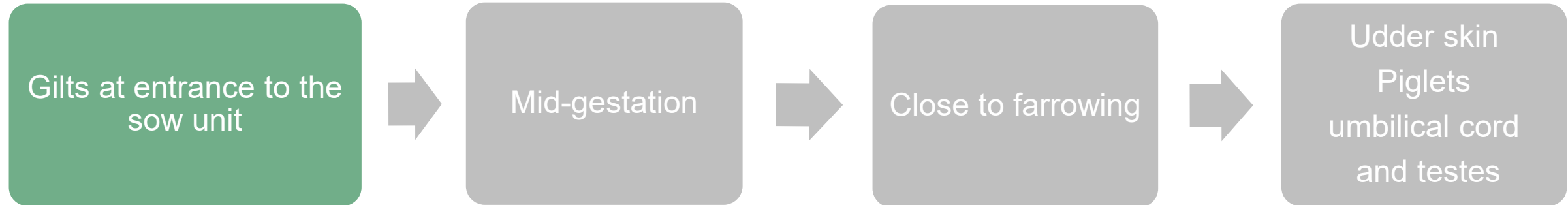


# Danish PRRS guidelines for replacement animals

- Immunisation in a quarantine unit
  - Both purchased and own production of gilts
- All-in all-out management
- 12 week quarantine period
- MLV vaccines matching the PRRS types on the farm



# Gilt introduction on PRRSV-positive farms

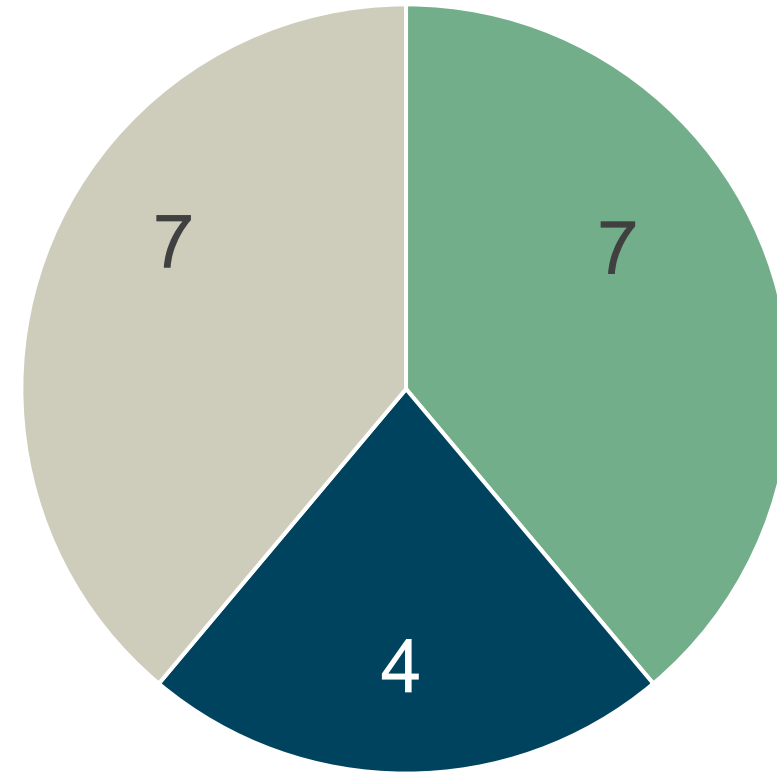


## Questions:

- Purchased or own production of gilts
- How is the quarantine facility and management
- How are the gilts immunized
- Are the gilts seropositive when they enter the sow unit
- Are the gilts viremic when they enter the sow unit

## 18 Danish PRRSV-positive farms

- Farm inventory of 830 to 2400 sows
- 16 farms purchase gilts
- 2 farms produce gilts for own replacement



■ PRRSV type 1 ■ PRRSV type 2 ■ PRRSV 1+2

# Gilt introduction on 18 Danish PRRSV-positive farms

## Materials and methods

- Source of gilts
- Quarantine facility and management in questionnaire
- PRRS vaccination
- Blood sampling in 15 gilts, on the day they entered the sow unit



# Analyses on serum

- The serum samples were analyzed at the University of Copenhagen
- Antibodies against PRRSV using ELISA tests
- Real-time RT-PCR analyses for PRRSV



# Definition of optimal quarantine management



- All-in-all-out
- Separate entrance
- No air contact to other pigs (e.g. a door to another section)
- Quarantine time

# Gilt introduction on 18 Danish PRRSV-positive farms

	Number of farms	Purchase of gilts	Optimal quarantine facility for purchased gilts
PRRSV type 1	7	7	7
PRRSV type 2	4	3	2
PRRSV type 1 and type 2	7	6	2
Total	18	16	11/16 (69%)

# Gilt introduction on 18 Danish PRRSV-positive farms

	Number of farms	Purchase of gilts	One MLV vaccine for gilts	Two MLV vaccines for gilts
PRRSV type 1	7	7	6	1
PRRSV type 2	4	3	3	0
PRRSV type 1 and type 2	7	6	3 (PRRSV type1)	4
Total	18	16	12	5



# Gilt introduction on 18 Danish PRRSV-positive farms

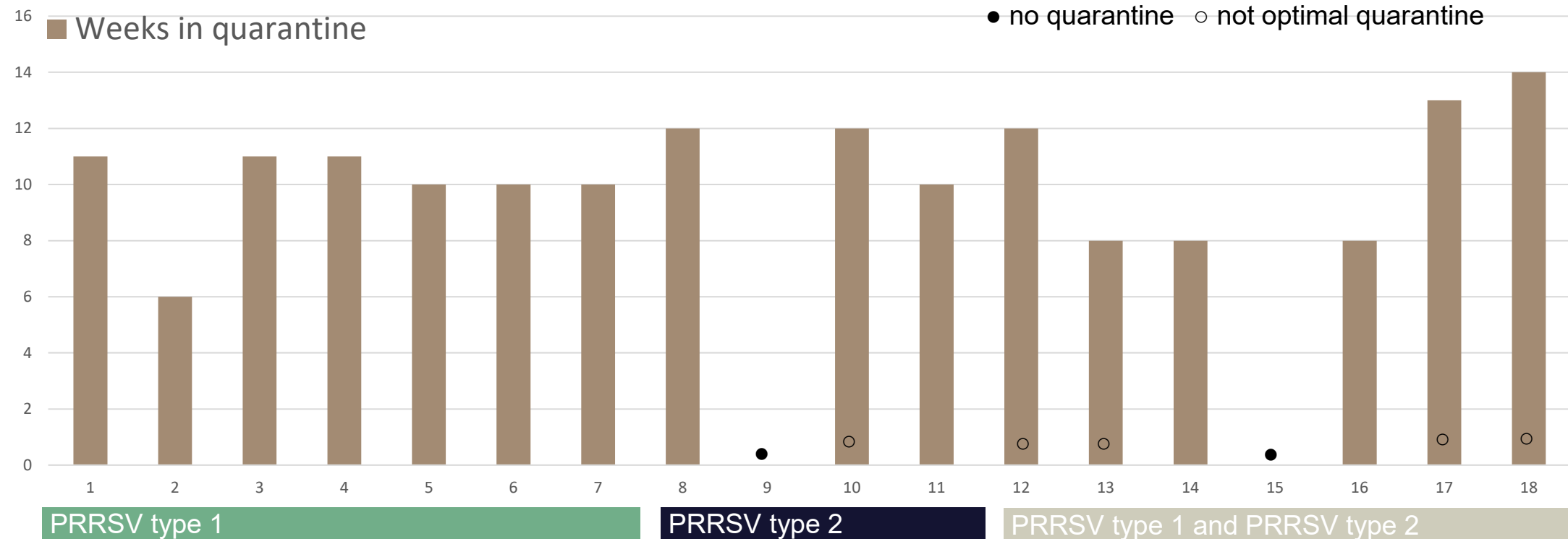


# Gilt introduction on 18 Danish PRRSV-positive farms



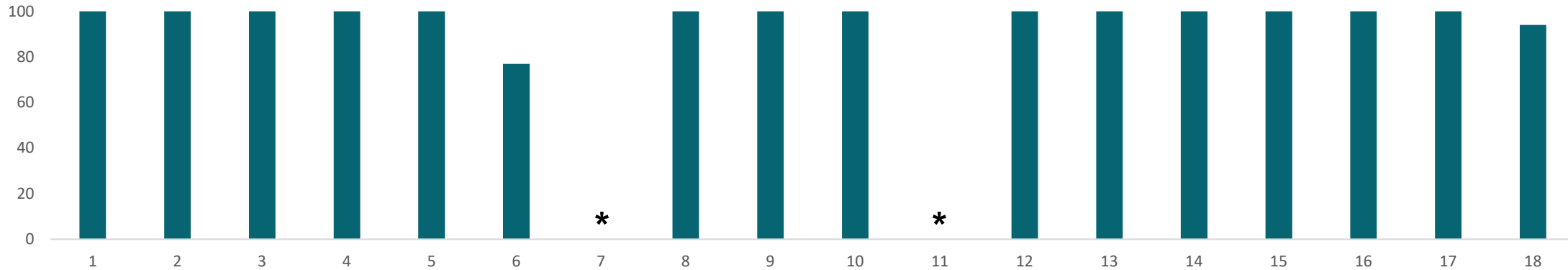
None of the tested gilts had PRRSV in real-time RT-PCR analyses

# Gilt introduction on 18 Danish PRRSV-positive farms

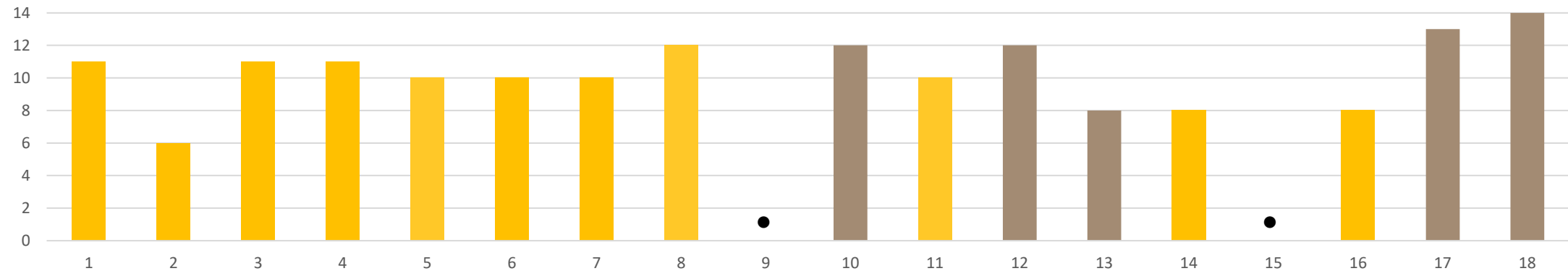


# Gilt introduction on 18 Danish PRRSV-positive farms

PRRS antibodies, % positive \* not vaccinated against PRRSV



Weeks in quarantine, Yellow=Optimal management ● no quarantine



Optimal quarantine management in 11 farms, but less than 12 weeks quarantine in 10 of these farms

## Results of gilt introduction on 18 PRRSV positive farms

- Purchased gilts from one single source on 16 of the 18 farms
  - Optimal quarantine management in 11 of 16 farms (69%)
    - often less than 12 weeks
  - Gilts are immunized with MLV PRRS vaccine – one or two types
- 
- Almost all vaccinated gilts were seropositive when entering the sow unit
  - None of the tested gilts were viremic when they entered the sow unit

# Questions?

Lars E. Larsen, KU  
Lise Kvisgaard, KU

Hanne Bak, SEGES  
Mads Skytte, SEGES

Farmers, staff and veterinarians

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