



PRRSv Diagnostics Insights



South West Vets

Swine Health Ontario - Big Bug Day 2021

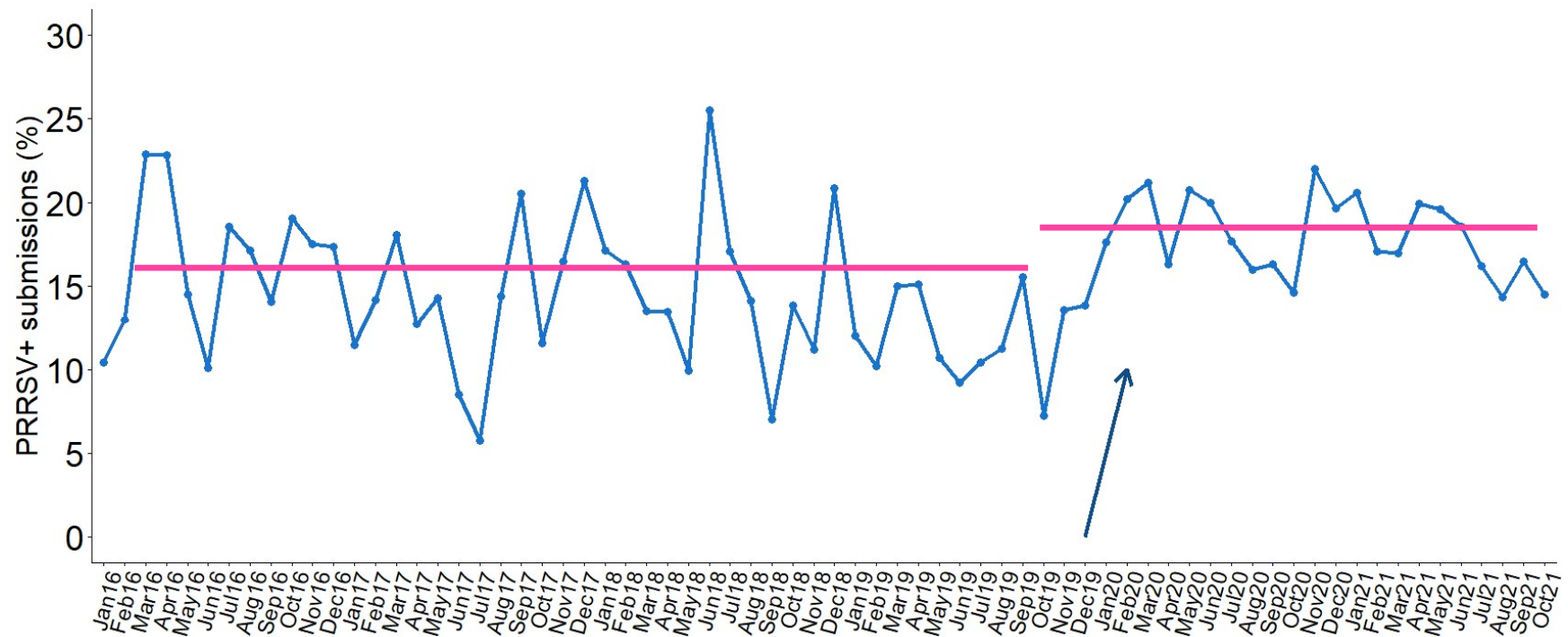
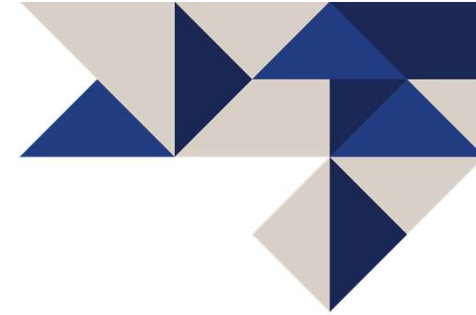


Key Messages

- PRRSV submissions have increased in last year:
 - 1-8-4, 1-30-1 and 1-1-1 strains
- Diagnostic data can be used to gain insights and associate it with production data
- Surveillance sampling methods are efficient, different options exist

PRRSv positive submissions

Jan 2016 to Oct 2021



PRRSv Disease Statistics 2016-2021

Sample Types

- **227,017 samples** (77% of 294,767 total)

Diagnostic tests:

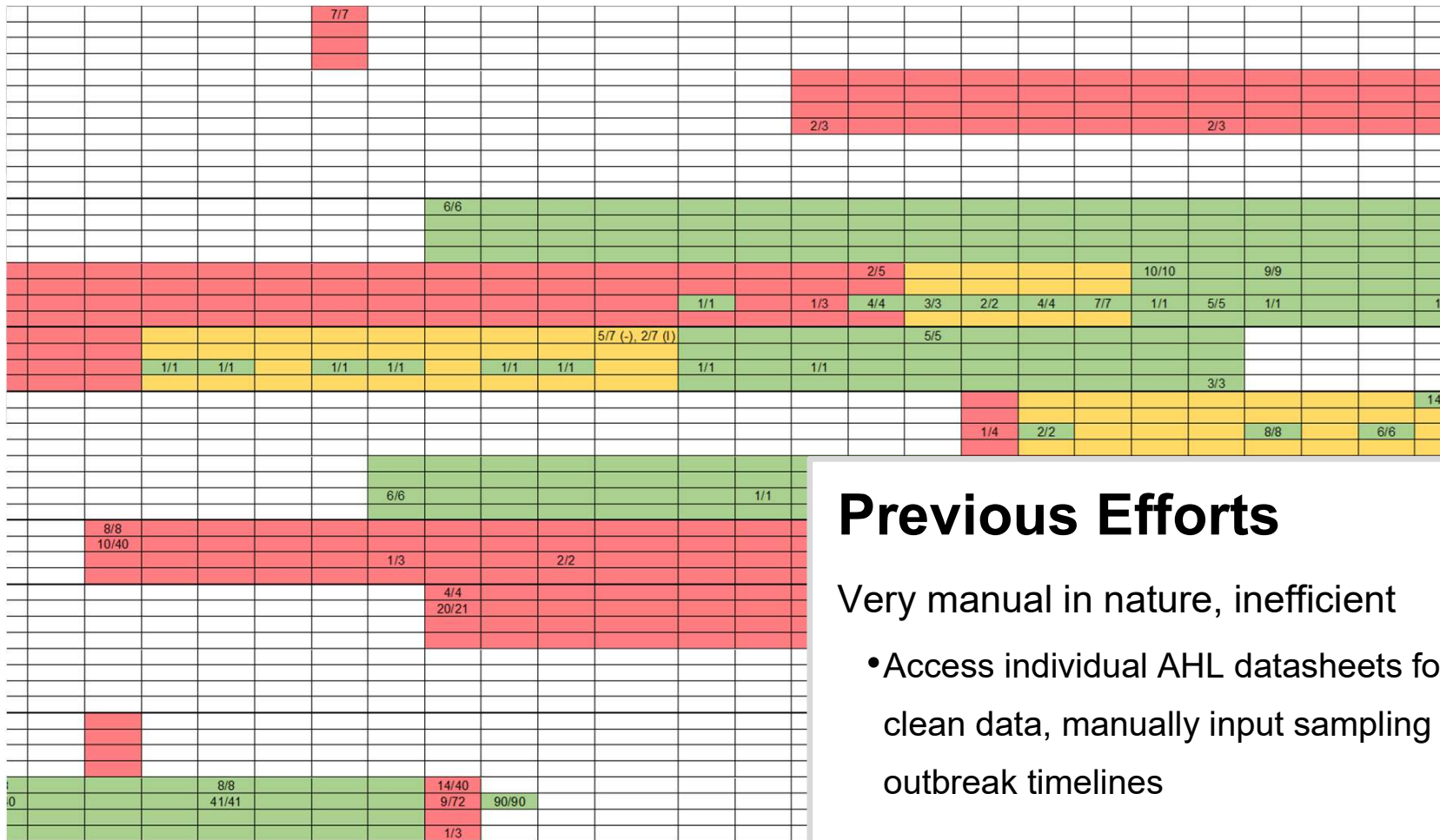
- **ELISA antibodies in serum/blood (64%)**
- PCR (36%)
- ELISA antibodies in oral fluids (1%)
- IHC (0.2%), IFA (0.1%)

Sample Types:

- **Serum/blood (64%)**
- Oral fluids/saliva (9%)

Quantity of Submissions

- **11,731 PRRSv** submissions in last 5 years
 - 72% of 16,316 total submissions
- On average, 166 PRRSv submissions per month
 - 16% positive on avg. per month
 - In last 22 months, 18% submissions were positive on average
- **Positivity rate is 2% higher compared to the previous 4 years**



Previous Efforts

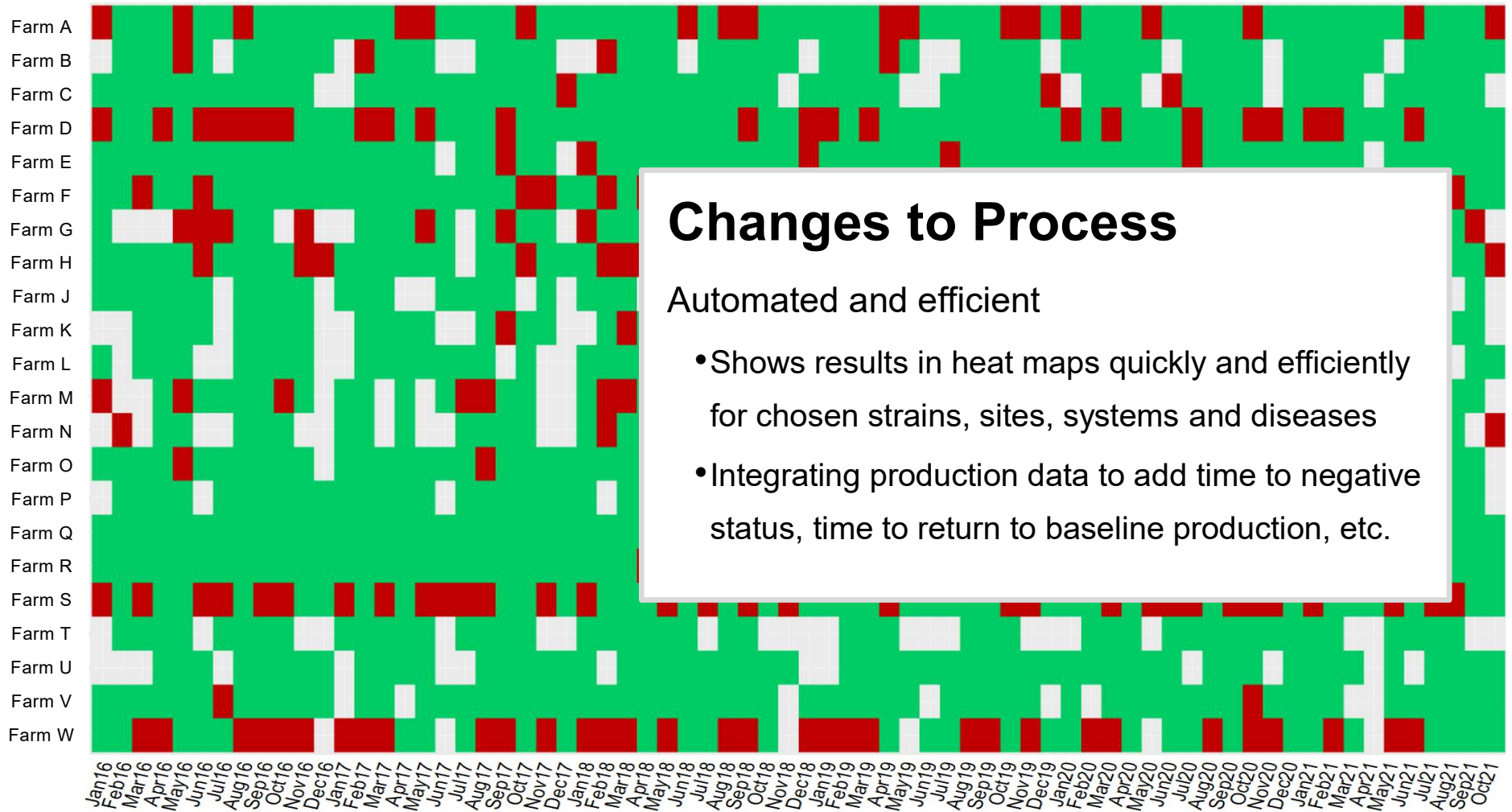
Very manual in nature, inefficient

- Access individual AHL datasheets for specific sites, clean data, manually input sampling results into outbreak timelines

Changes to Process

Automated and efficient

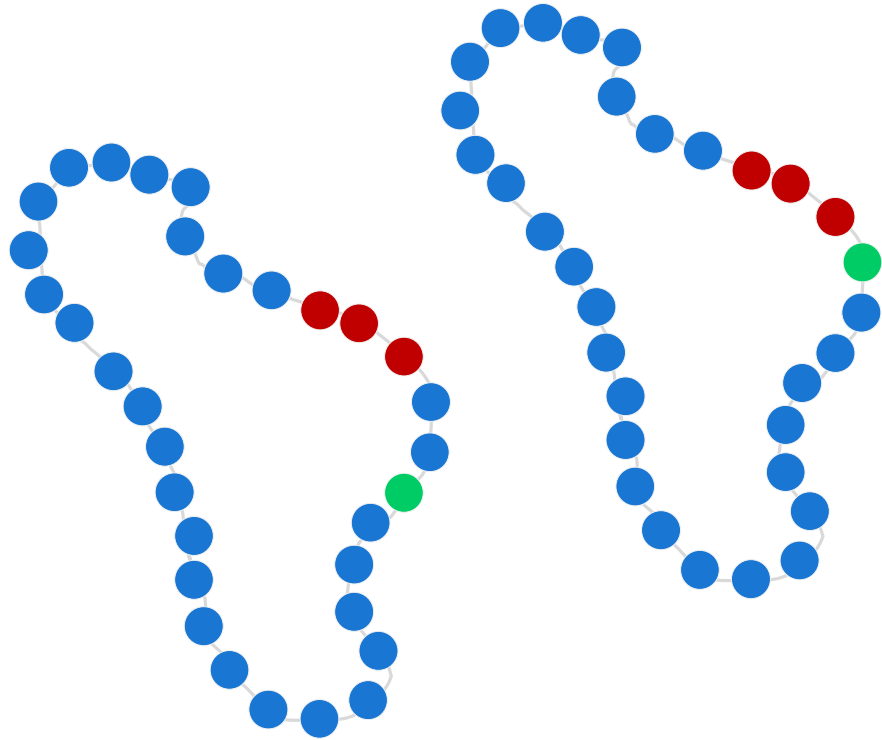
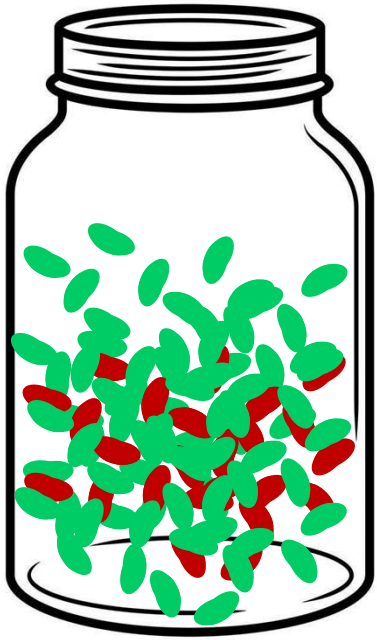
- Shows results in heat maps quickly and efficiently for chosen strains, sites, systems and diseases
- Integrating production data to add time to negative status, time to return to baseline production, etc.





- Better support to pork producers
- Improve functionality & useability of our data
- Industry focus on learning from collective experiences

Sequencing 101

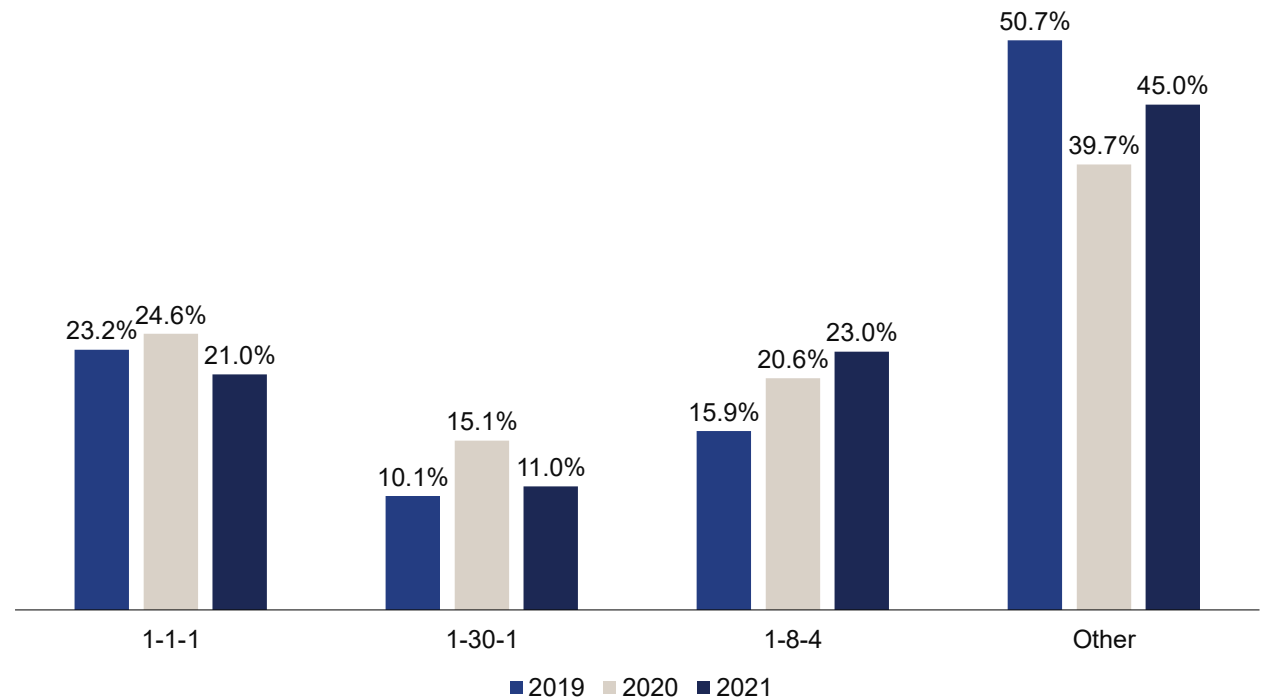


SWV PRRSv Sequence Database 2017 to 2021

- **372** sequences in database
- **43** different RFLP sequences

- 3 RFLP types are common:
 - 1-1-1
 - 1-30-1
 - 1-8-4
 - Other

Percentage of Sequenced Virus with 1-1-1, 1-30-1, 1-8-4 and other RFLP types in 2019, 2020, and 2021



Case Study

2019

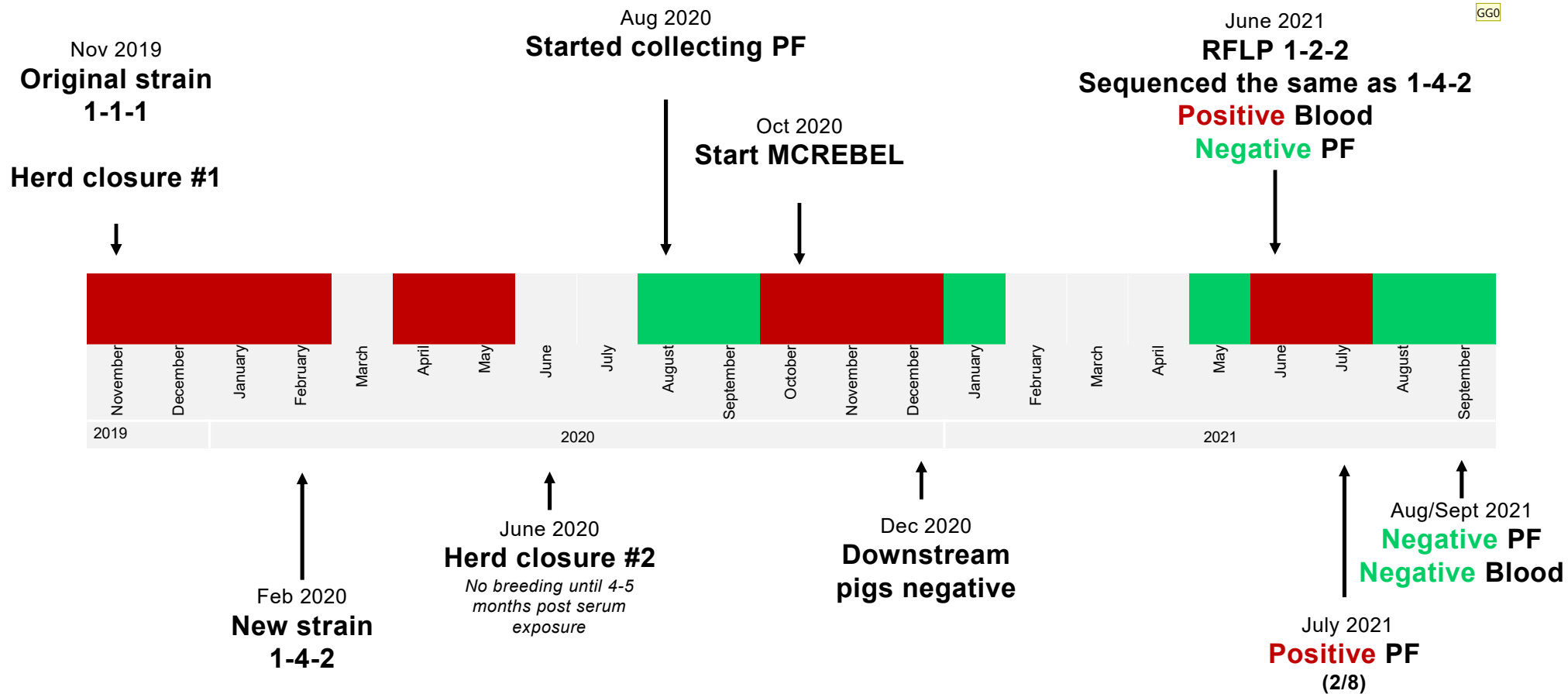
- 1500 sows
- Farrow-to-wean

2020

- Expansion to 2700 sows
- Change to internal multiplication
- 2 field strains of PRRSv

2021

- Elimination hiccups



Slide 11

GGO RFLP database says 1-2-2 but my notes from our convo
are 1-4-2

Gillian Greaves, 2021-12-01T22:31:02.550

Surveillance Sampling





Next Steps

- Longitudinal sampling
- Longer herd closures with short-term gilt exposure
- Increased use of commercial vaccines
- Detailed case reporting
- More filtered sow barns
- More growing pigs vaccinated for PRRSv



Thank You



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