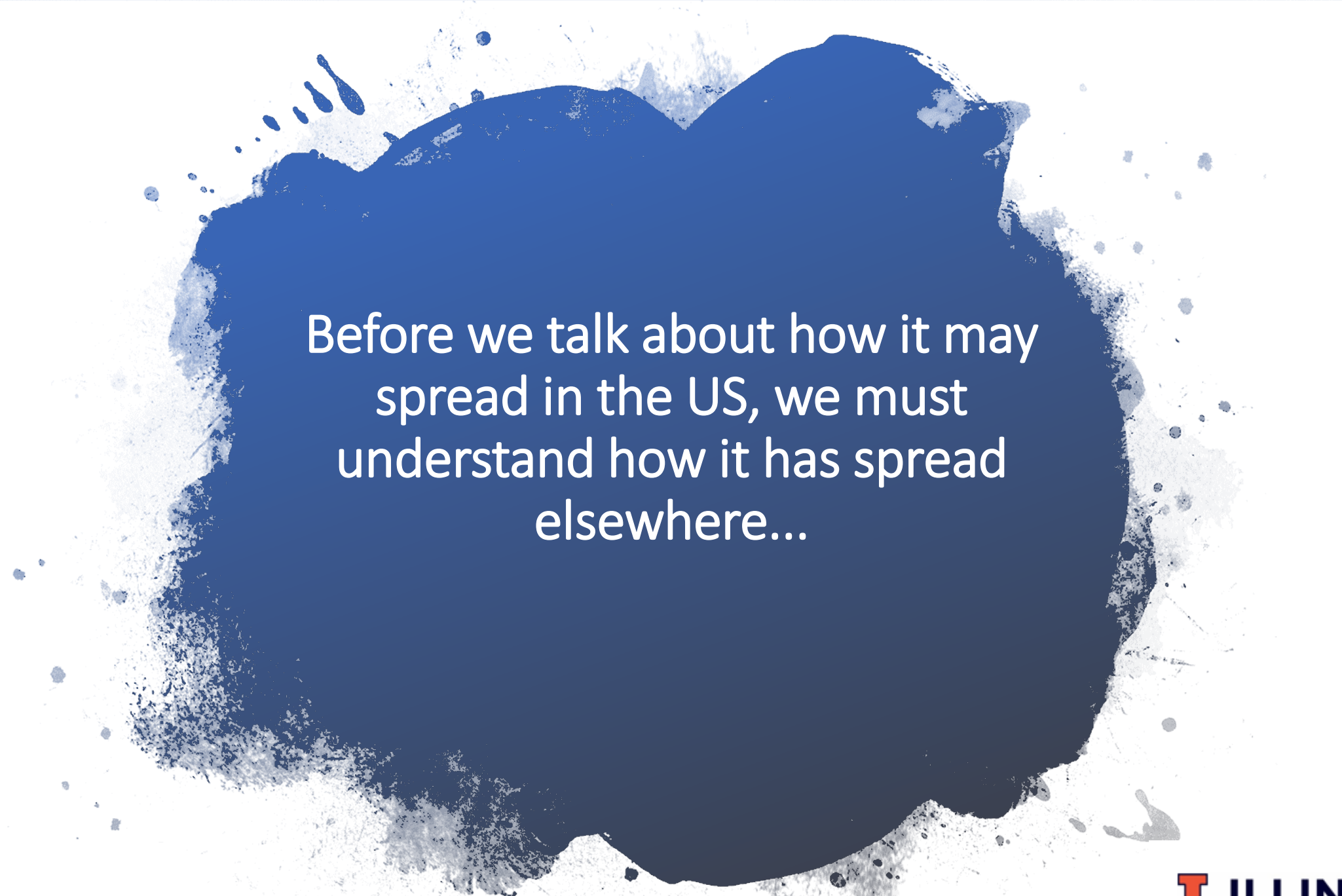


How might ASF spread in the US?

Ben Blair, DVM

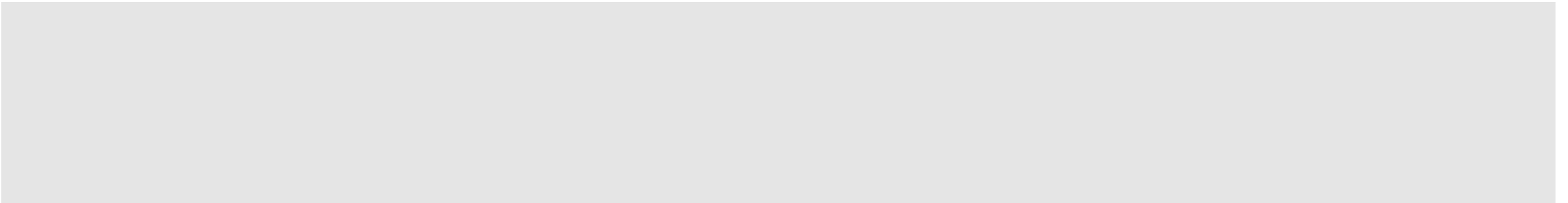
The logo for the University of Illinois, featuring a red block letter 'I' followed by the word 'ILLINOIS' in dark blue, all contained within a white rectangular box.

I ILLINOIS



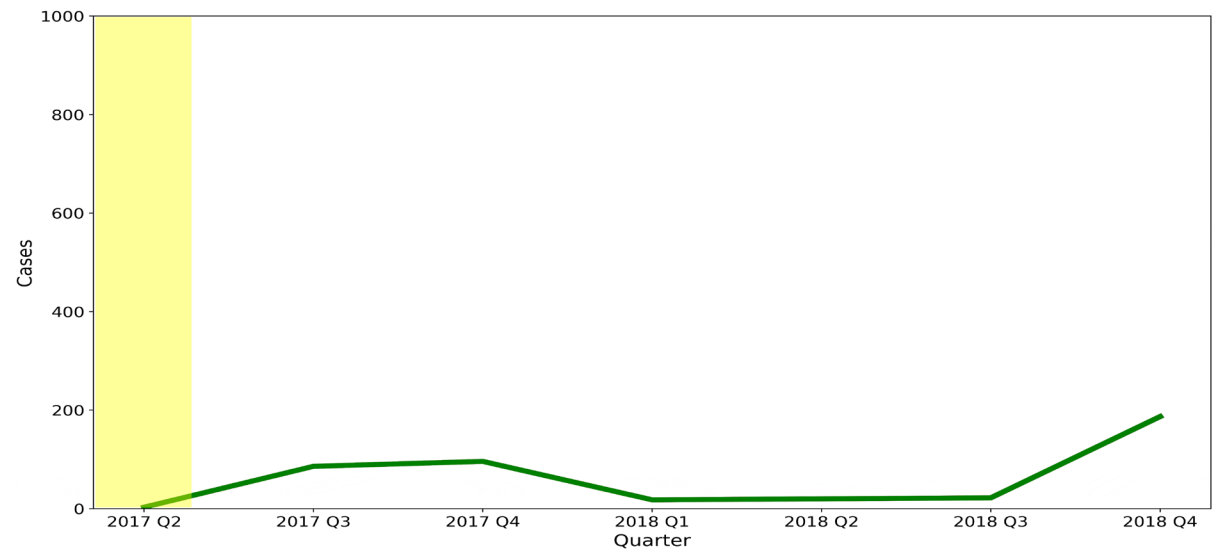
Before we talk about how it may
spread in the US, we must
understand how it has spread
elsewhere...

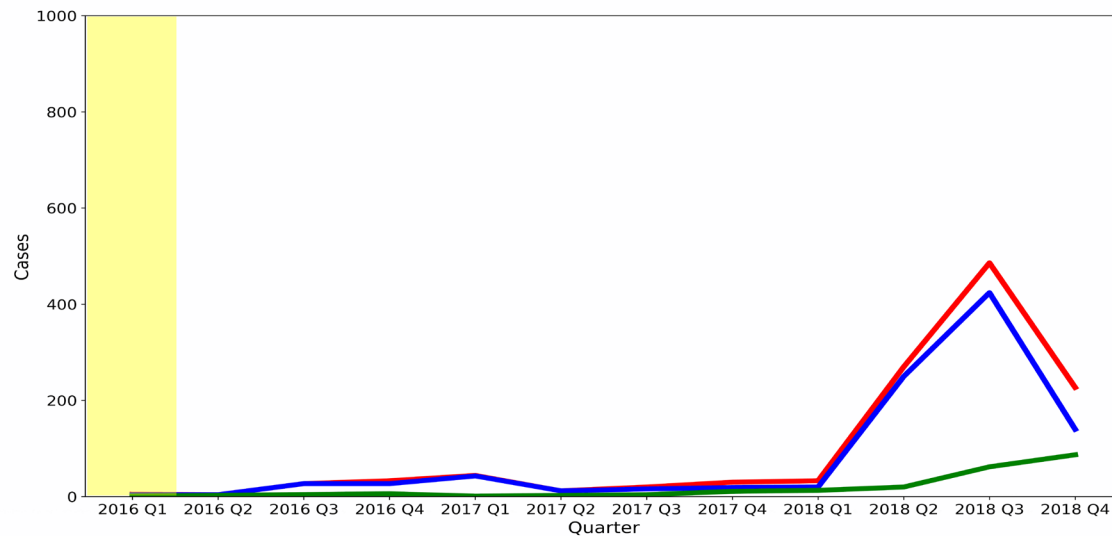
Let's compare a few
unique outbreaks in
Europe over the last 3
years



Outbreaks in the Czech Republic, Hungary, Belgium

Wild Boar exclusive outbreaks



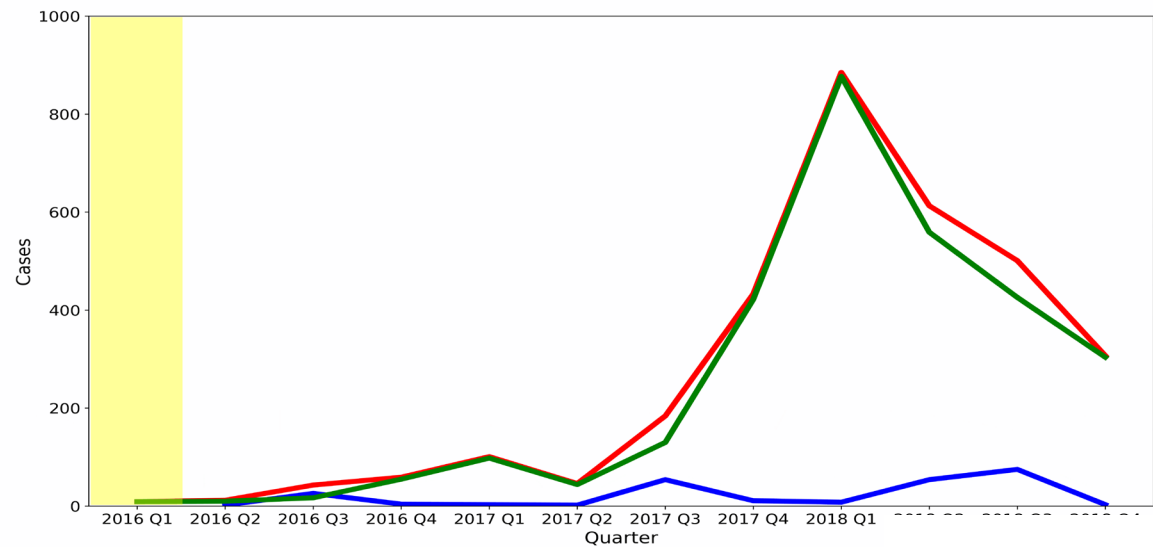
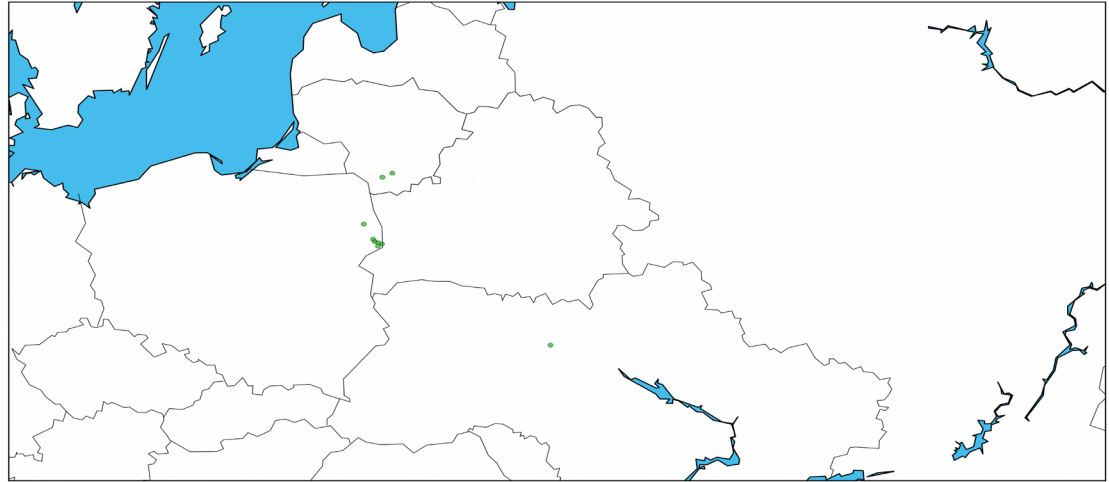


Ukraine and Romania

- Domestic pig dominated

Poland's outbreak

Wild boar dominated





Are wild boars
to blame?

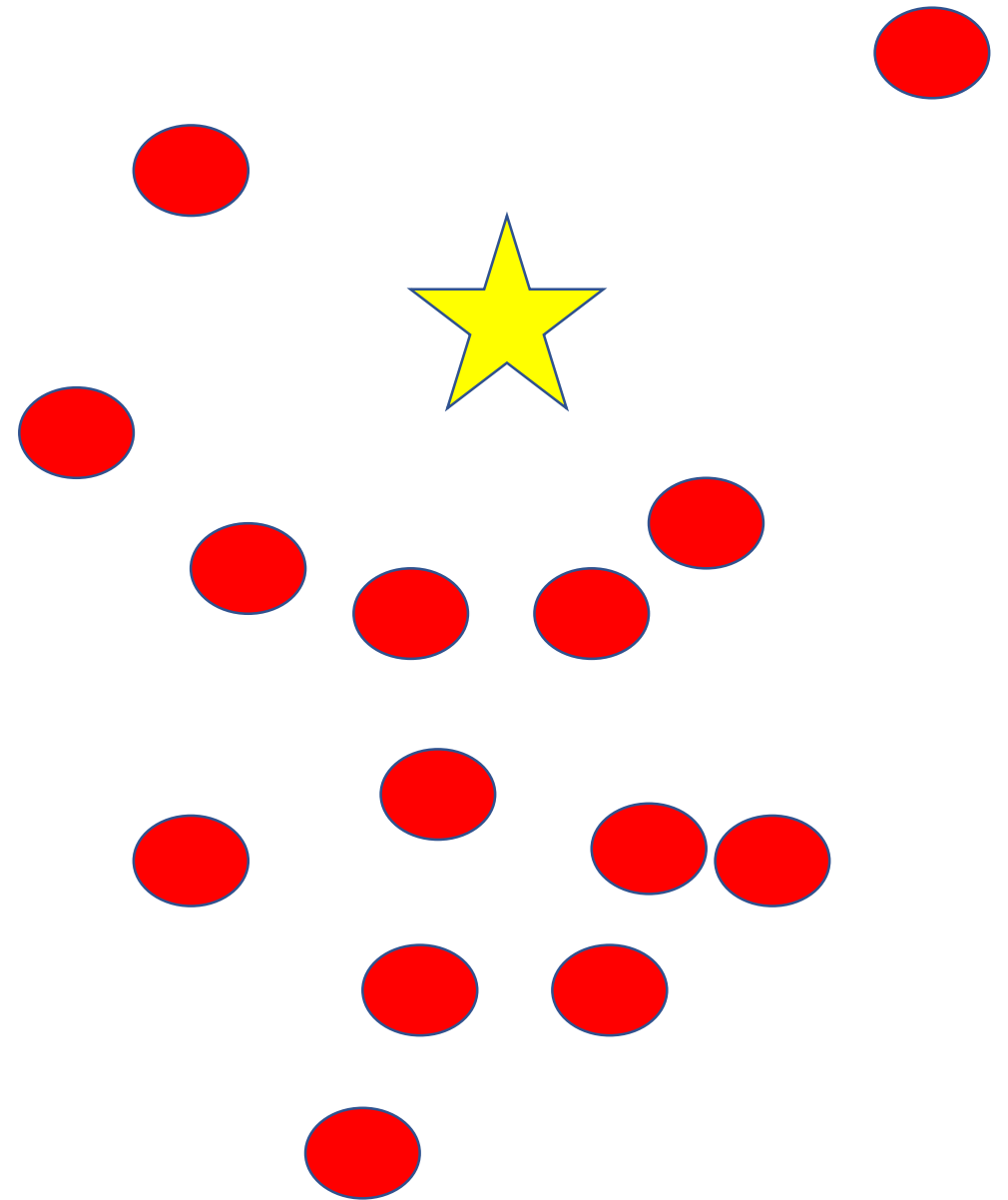
Spread of African Swine Fever is radial around an epicenter in wild boar populations.

What do these maps tell us?



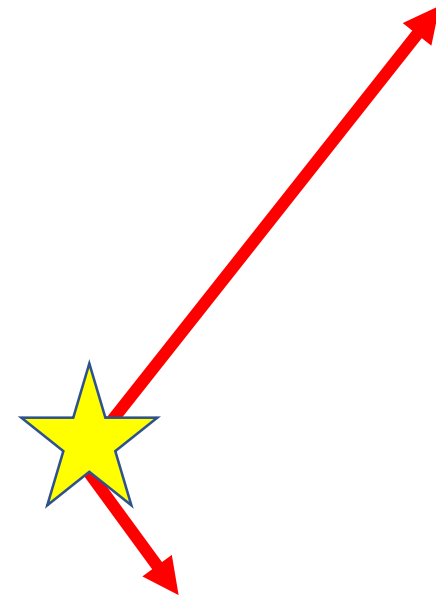
Spread of African Swine Fever is
asymmetric and progressive within
domestic swine populations

What do these
maps tell us?



Spread of African Swine Fever is
asymmetric and progressive within
domestic swine populations

What do these
maps tell us?



A photograph of a wild boar standing in a grassy field with trees in the background. A thick red banner is overlaid diagonally across the image, containing the text 'Not Guilty' in black, bold, italicized font. The entire image is framed by a white oval with a grey border, set against a background of concentric grey circles.

Not Guilty

So the
verdict on
wild boar?

So if not wild boars, who is to blame for the spread of ASF in domestic pigs.

- Unfortunately like most other diseases that face the swine industry today we tend to be the drivers of disease spread.
 - PEDV
 - PRRSV
 - TGE

How is it
likely to
spread

Routes of Pathogen Introdcutiion

Animals

- Pigs
- Other

Things Entering

- Transport
- Supplies
- Equipment

Things Leaving

- Dead
Removal
- Manure
Removal

People

- Workers
- Visitors

I'm going to focus on 2 big topics today...

**Infected
animal
movements**

**Contaminated
trailer
movements**

Here's why I
chose those
2

Routes of Pathogen Introdcuton

Animals

- Pigs
- Other

Things Entering

- Transport
- Supplies
- Equipment

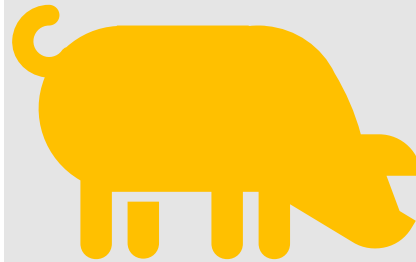
Things Leaving

- Dead
Removal
- Manure
Removal

People

- Workers
- Visitors

The movement and introduction of diseased animals into naive herds



- Still one of the most common routes we observe during disease outbreaks on farms
- Movement of diseased animals also increases the possibility of indirect transmission by contaminating trailers, etc.

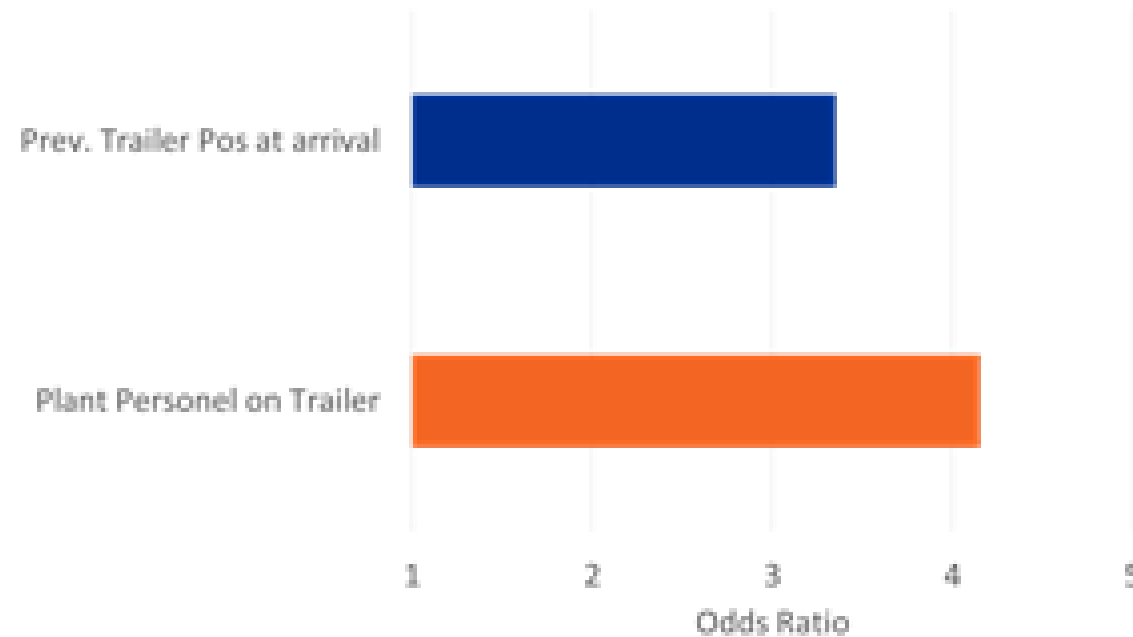
Ways to prevent the spread of ASF via live animal introductions

- **Ability to indentify ASF within animals**
- **Understand the trust the source of your aniamls.**
- **Limit the number of introductions if possible and feasible**

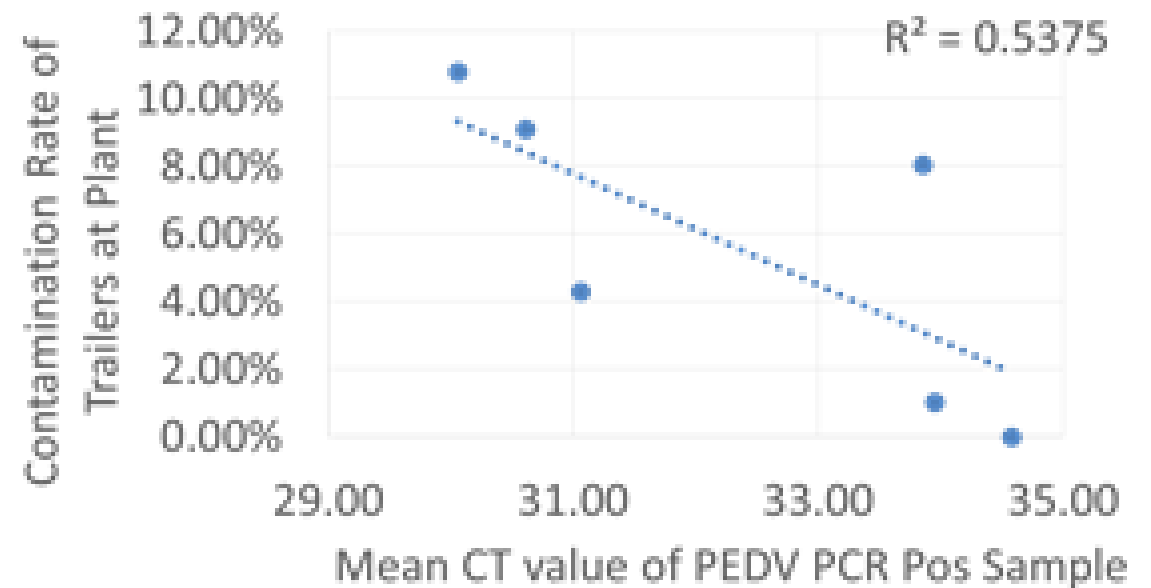
One positive trailer in means 1.7 positive trailers at exit

Plant	Contaminated at entry	Contaminated at Plant	Contamination Ratio
A	2.25%	8.05%	3.58
B	7.00%	4.30%	0.61
C	10.84%	10.81%	1.00
D	2.00%	0.00%	0.00
E	14.56%	3.08%	0.62
G	3.00%	1.03%	0.34
All	5.98%	4.31%	0.72

Conditions at the time of unloading influence contamination rates

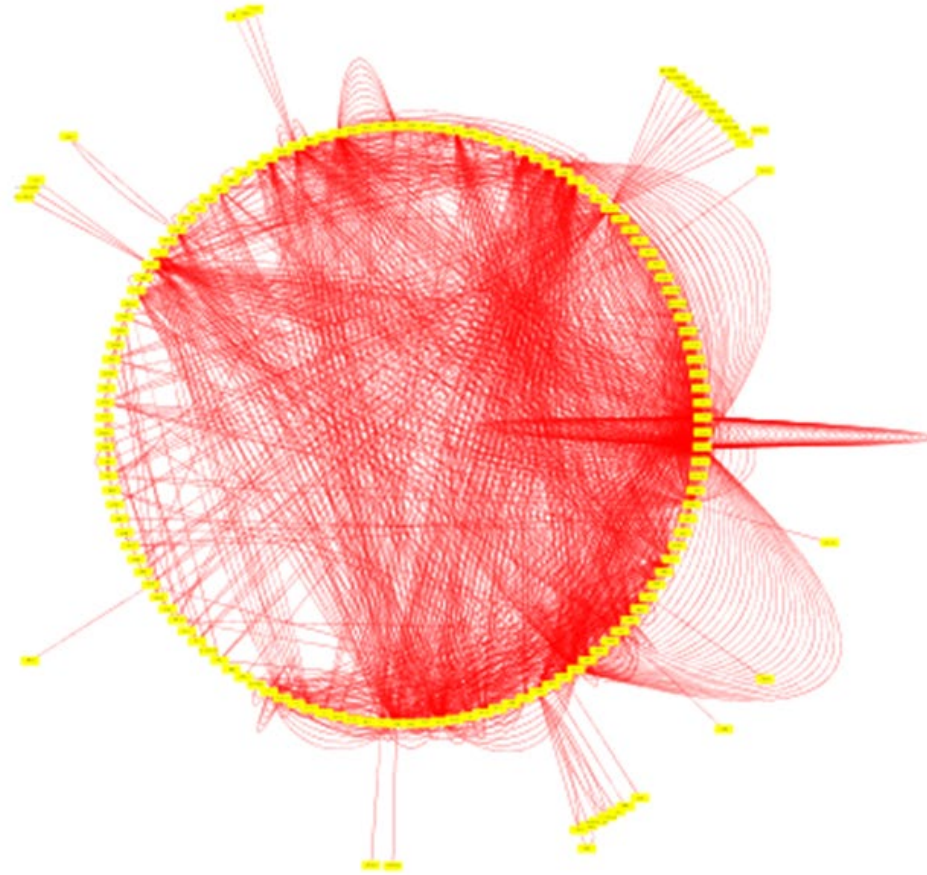


More contact increases risk



More virus increases risk

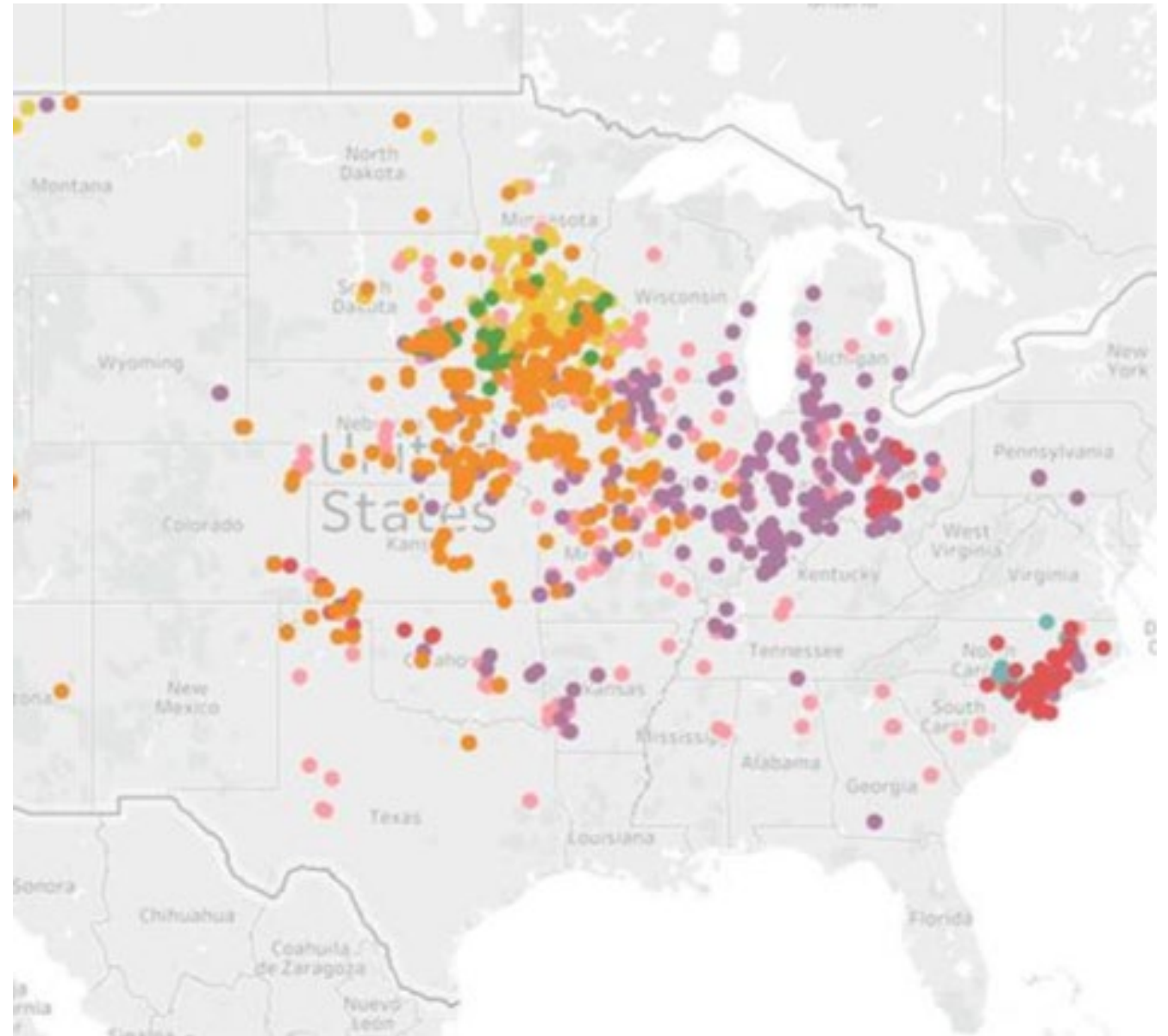
The number of connections generated is mind-boggling...



So if we know trailers can spread disease, and there are a lot of opportunities for disease to contact farms, what do we know about the risky points of contact, i.e. markets.

Here's what we know about the Cull Sow Market

- Sows travel on average over 300mi with some traveling as far as 1200mi
- Plants receive sows from 17 states on average



They also stay in the marketing channel awhile.

Days	Percent
≤ 3 days	66.1%
4-5days	24.3%
> 5 days	9.6%

- Does anyone know the incubation period of ASF?
- Somewhere between 4-19days

What does all
this mean...

- Introduction of ASF within these marketing channels may allow disease to replicate and spread back to farms
- Again stresses the idea around proper disease identification
- Emphasizes the need for sound biosecurity practices.

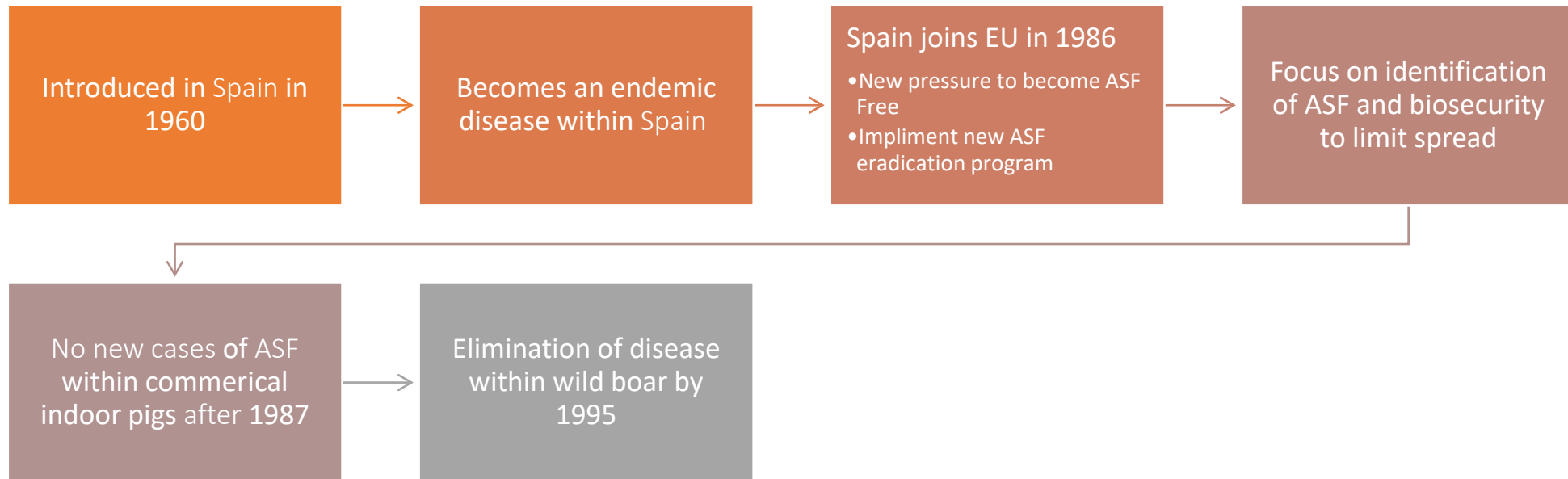
Takeaways-

Movement of **animals, people, or objects** most likely way ASF will spread

Proper and expedite disease identification is key to limiting the spread of ASF

Biosecurity practices, are still the best measures to prevent the introduction and limit the spread of ASF

ASF history within Spain





Biosecurity Works!!!

Integrated Food Animal Management Systems
Department of Veterinary Clinical Medicine
University of Illinois
bblair2@illinois.edu

Thank You