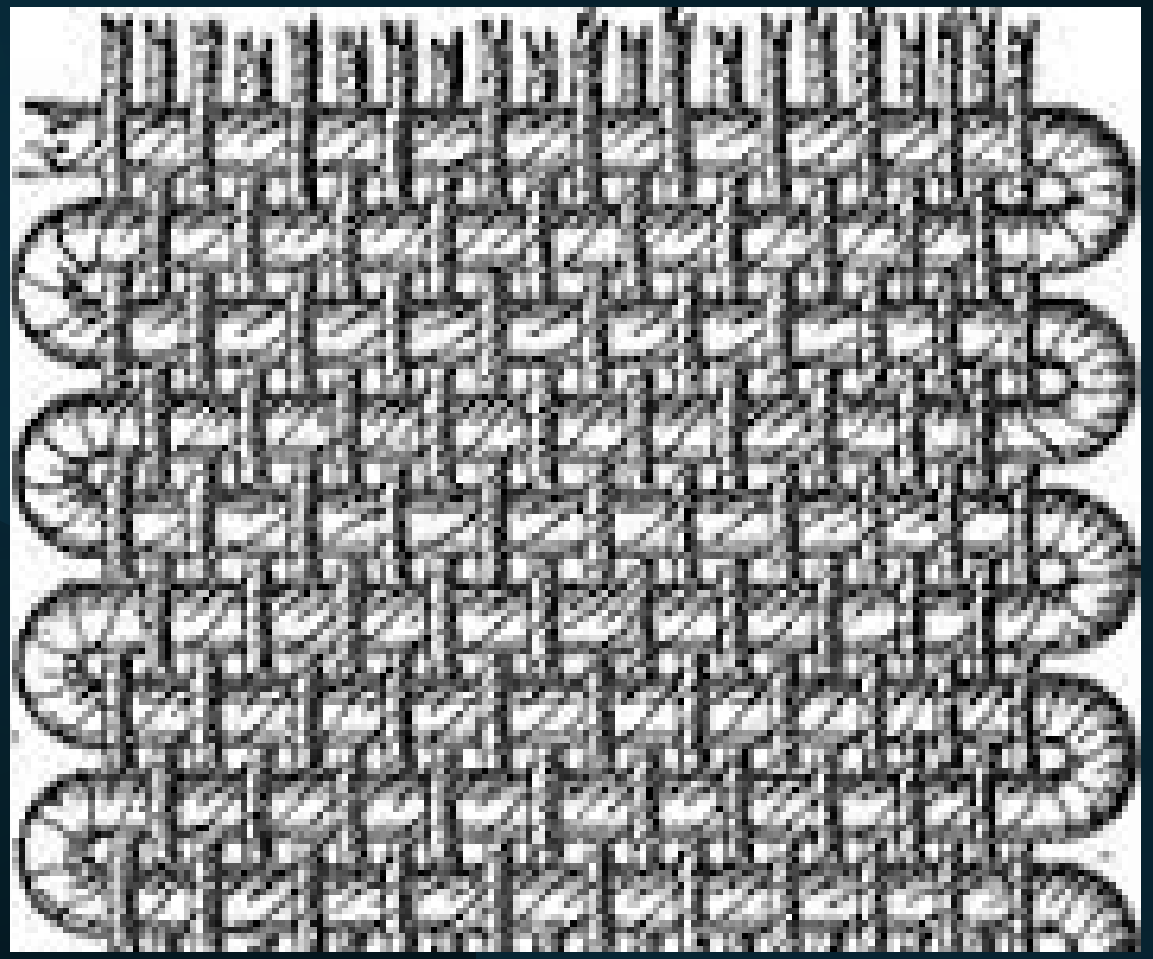
USAHA

Thoughts on Applied Epi from AMPV

15 Lessons in 15 Minutes!

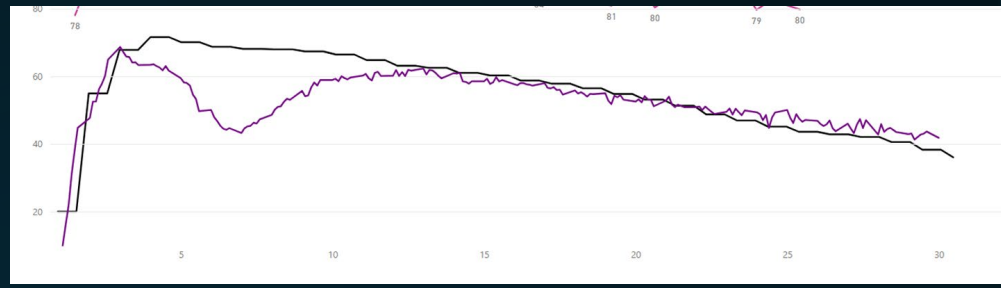
Field Craft

Data & Stats



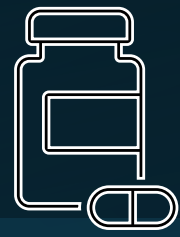
Disease is here

Based on performance metrics (egg production)



Based on morbidity and mortality

Disease is: ???



Results = All Neg
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Time Lag

Disciplined Case Workup
Old School & Cool School

Cool School says E coli everything else negative

Old School says slight increase in AMPV-Type C titer (Acute vs Convalescent)

<u>Lesson 1:</u> Have a plan to test for multiple etiologies- fight the cost war when in production!

<u>Lesson 2:</u> Don't discount old technologies, skills or approaches. Just because they are old doesn't mean they are worthless.

<u>Lesson 3:</u> Trust what your tests are pointing to. If it doesn't make sense or you don't have an answer don't move on….most of the time!

A Disease is pointed to

Still Negative results

Ask around and recruit

Cool School comes through

<u>Lesson 4:</u> If you ask around you may find you are not on the island alone after all. Production can be competitive, that can hinder this.

<u>Lesson 5:</u> We have lost a tremendous amount of talent in "old school green thumb" virologists over the last 10 yrs!

<u>Lesson 6:</u> If facing an unknown the more labs the better. We have favorites or contracts or are unwilling to keep paying for overnight shipping etc but have to get over that!

Asking around …no disease here

Ask more questions

We are having more of disease X this year

Have you tested for our disease?

Lesson 7: Don't settle for the first answer. Don't be afraid to ask other questions or just talk shop.

Lesson 8: When we see "normal" endemic disease increase we need to keep in mind to not just focus on that, but ask why?

Lesson 9: Don't forget to ask the reason behind no. No because you are looking for it and testing for it is different than I am not looking for it nor testing.

Indeed we do have the disease

What is the disease costing me?

Now what?

Where is it at?
What does it look like?
Control options?

<u>Lesson 10:</u> Action takes some convincing if perceived effects of the disease are not appreciated

<u>Lesson 11:</u> Need a process to track this new flow of information. Need a place to collect this. NAHRS…but what if it isn't on the list. Will a truly "new " disease be on the list- no. So what do we do then?

What if control option requires live viral exposure?

What if control option is outside of the US?

So how does this work?

Lesson 12: Have to gather the data from across the US centrally. This then has to be shared with the correct people to demonstrate need for control. Have to be able to also have trust in the data.

Lesson 13: What are triggers for major action?
Number of cases? Number of cases in a state? Number of states involved? Some disease severity scoring method?

Lesson 14: May need to think outside the box. How do we do this safely?

Implement the control

Monitor the control

Develop a long term solution

<u>Lesson 15:</u> Large scale disease investigation, study and control requires a lot of teamwork from field to the top of the USDA!

Parting Thoughts for this Epi Group

- **Are we focusing too hard on data and odds ratios and R and artificial intelligence and published reports?**
- **It was clear that there needs to be a better process to gather information on emerging diseases and a better way to disseminate that information from local to national level.**
- **What are the clear Epi triggers (perhaps within each species) that require the next level …or two…of action?**