

Virginia Master Cattlemen's Program

Southwest District, Virginia Cooperative Extension



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Biosecurity....

What does it mean and should you be concerned?

Biosecurity defined....according to John Shutske, author “**Beef Magazine**”

.....specific **actions** a producer can take to **reduce** the chances of animal diseases or harm to their herd caused by contamination of water, feed, or facilities where done intentionally or unintentionally.

A Problem for the Unprepared

- Solve for the Equation:

$$ax^2 + bx + c = 0$$

$$x^2 + \frac{bx}{a} + \frac{c}{a} = 0$$

$$x^2 + \frac{bx}{a} + \frac{b^2}{4a^2} - \frac{b^2}{4a^2} + \frac{c}{a} = 0$$

$$\left(x + \frac{b}{2a}\right)^2 - \frac{b^2}{4a^2} + \frac{c}{a} = 0$$

$$\left(x + \frac{b}{2a}\right)^2 = \frac{b^2 - 4ac}{4a^2}$$

What is the easiest problem to solve???

The one you don't have.....

Importance of Biosecurity

- Disease Prevention (\$\$\$\$\$\$)
 - ↓ morbidity and death
 - ↓ Lower treatment costs
 - ↑ Marketing Options
- Legal/Ethical Incentives
 - Help keep your neighbors safe
 - Reduce likelihood of disease spread to wildlife
 - Lowers your litigation risks

Biosecurity is Important!

Why Don't Producers Do It?



Attitudes of many producers...

- Producers perceptions
 - We've always done it this way
 - This is too complicated
 - We are just too small...we don't have the space
 - It won't make a difference.....we've already had about every disease anyway
 - Our farm is safe and this is too expensive!

BUT.....Prevention is always less costly than treatment!!!!

Our Farm is Safe...

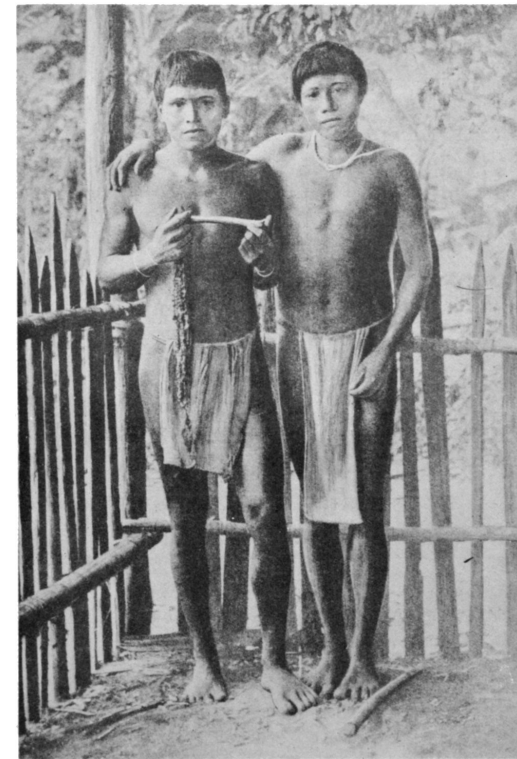
Which herd needs a more stringent vaccination program?

A. A Closed Herd

B. A Feedlot

Most Correct Answer....

They both do but different reasons...



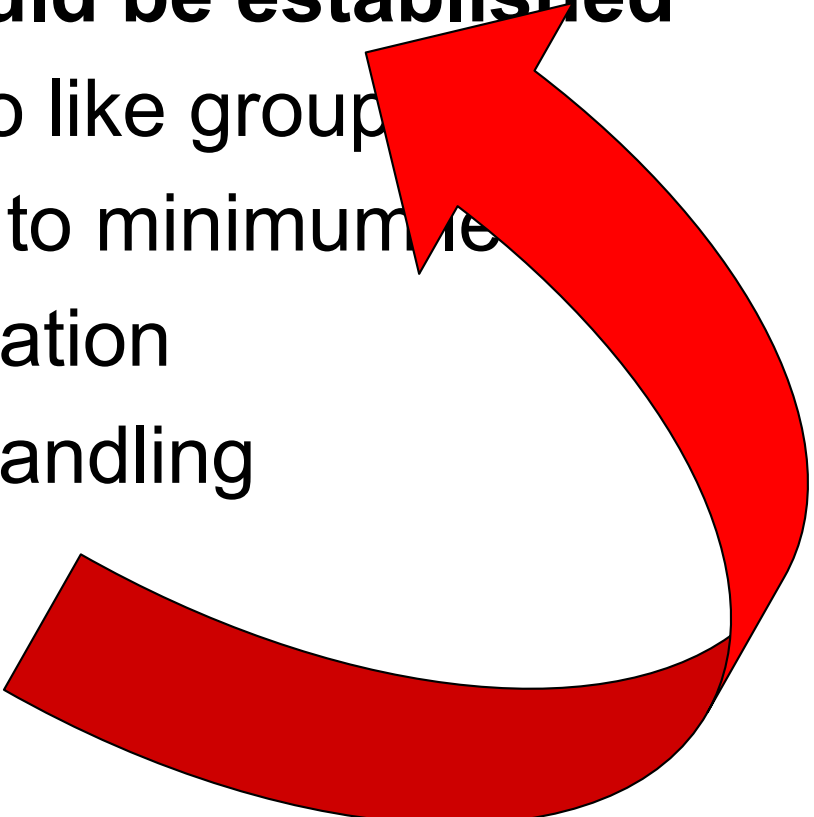
It's a Question of Exposure



Which cattle are most healthy?



General Management Procedures

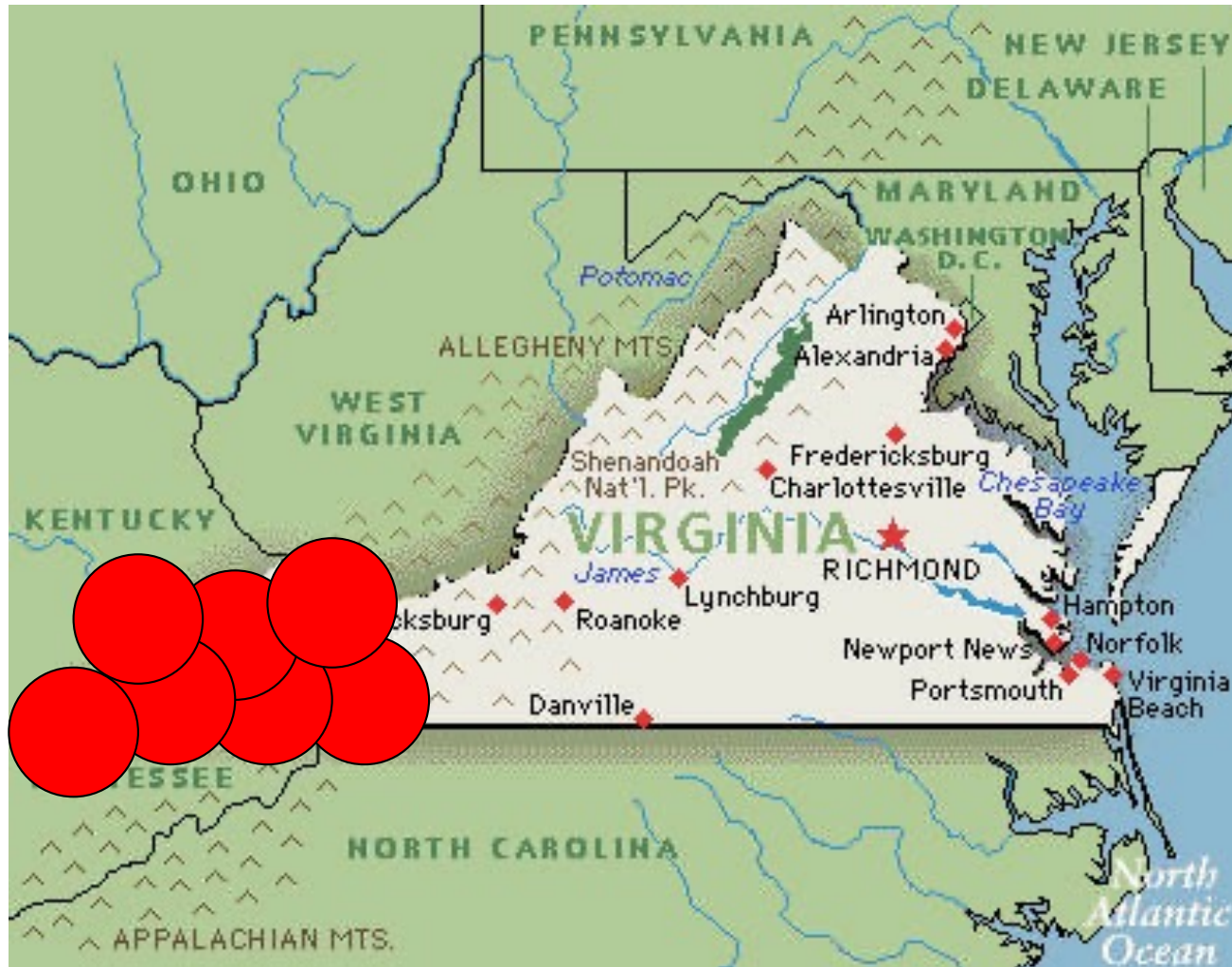
- **ID of all animals should be established**
 - Segregate animals into like groups
 - Keep stocking density to minimum
 - Limit areas of congregation
 - Reduce stress when handling
 - **Keep Records**
- 

Why Records Matter

Hoof and Mouth Disease Outbreak



Records Continued..



General Management for the Cow/Calf Producer

- Keep a good clean calving environment
- Calve heifers prior to mature cows
- Keep foster calving to a minimum



Commingling/Introducing New Cattle

- “Closed Herds” are cleanest, but usually not feasible
- Limit animal traffic and new introductions
- Returning animals are just like new introductions
- Receiving pens should be close to the perimeter

Commingling/Introducing New Cattle

- Clean trailers after use
- Animals should be quarantined for at least 3 weeks
- Try to limit new introductions....the fewer times and from fewer sources....the better
- Vaccinate to herd protocol prior to release from quarantine

Human traffic, visitors, and pests

- Limit as much as feasible
- Have a visitors log and mark restricted areas
- Footwear and clothes should be clean
 - Disposable overboots are cheap
 - Footbaths are good if they are kept clean
- Pests also can serve as a vector (anything that can spread disease)
 - Rodents
 - Birds
 - Strays

A Terrible Example



Routes of Transmission

- Aerosol
- Oral
- Direct Contact
- Fomites

Routes of Transmission

- Fomites (Inanimate objects that carry a pathogen)
 - Handle/treat sick animals after other groups
 - Sanitize equipment used in treatment
 - Cleaning supplies can be carriers too!
 - Vehicles, fence panels, buildings, etc. can transfer pathogens
 - SOP's (standard operating procedures) should be in place

Routes of Transmission

- Vectors
 - Can be controlled by elimination (chemical or biological) or preventing access to the animal
 - Eliminate access to wet/muddy areas and manure piles

An Easy (and often overlooked) Path to Trouble





Gosh! This is Overwhelming!



Have a Plan!



John Wooden

“Failing to plan is
planning to fail!”



One more “Andy-ism”

You CAN take it with you!



A Simple Journal

January

| Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
|---------------------|----------------------------|---------------------------|--------------------------|----------|--------|----------|
| | 48 calves in Well Field | 67 calves at old dairy | | 1 | 2 | 3 |
| 4 Water froze | 5 | 6 | 7 | 8 | 9 | 10 |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 |
| 18 | 19 Sold 28 steers | 20 | 21 Sold 26 heifers | 22 | 23 | 24 |
| 25 | 26 | 27 | 28 | 29 | 30 | 31 |

Better Records



What if something happens?

- Take action! Sooner the Better
- Hopefully you have a plan in place *prior* to
- Do your employees know what the plan is?
- A good plan can minimize damage as well as bring awareness to potential threats
- Post contact information to key personnel (veterinarian, VDACS, law enforcement, and extension service)

Conclusion

- **Biosecurity is an essential component of keeping any beef cattle operation secure and successful**
- **No risk can be completely eliminated**
- **No vaccination protocol can overcome a lack of planning (carelessness)**

Your Homework Assignment

- Develop or refine your farm's biosecurity plan
 - Contact numbers
 - Possible exposure points
 - Quarantine areas
 - Cleanliness issues?
 - Records....
 - Plan?where is it and who knows where it is

Resources

- “Beef Biological Risk Management” from the Center for Food Security and Public Health
- “Biosecurity on the Farm” John Shutske, University of Minnesota Beef Team
- “Biosecurity for the Livestock Enterprise” Dr. Matt Herson, Extension Beef Cattle Specialist, University of Florida

Thank You



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