

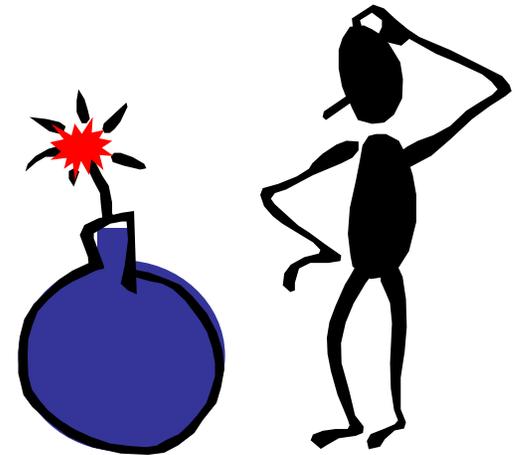
BVDV control plans components, setting and achieving goals

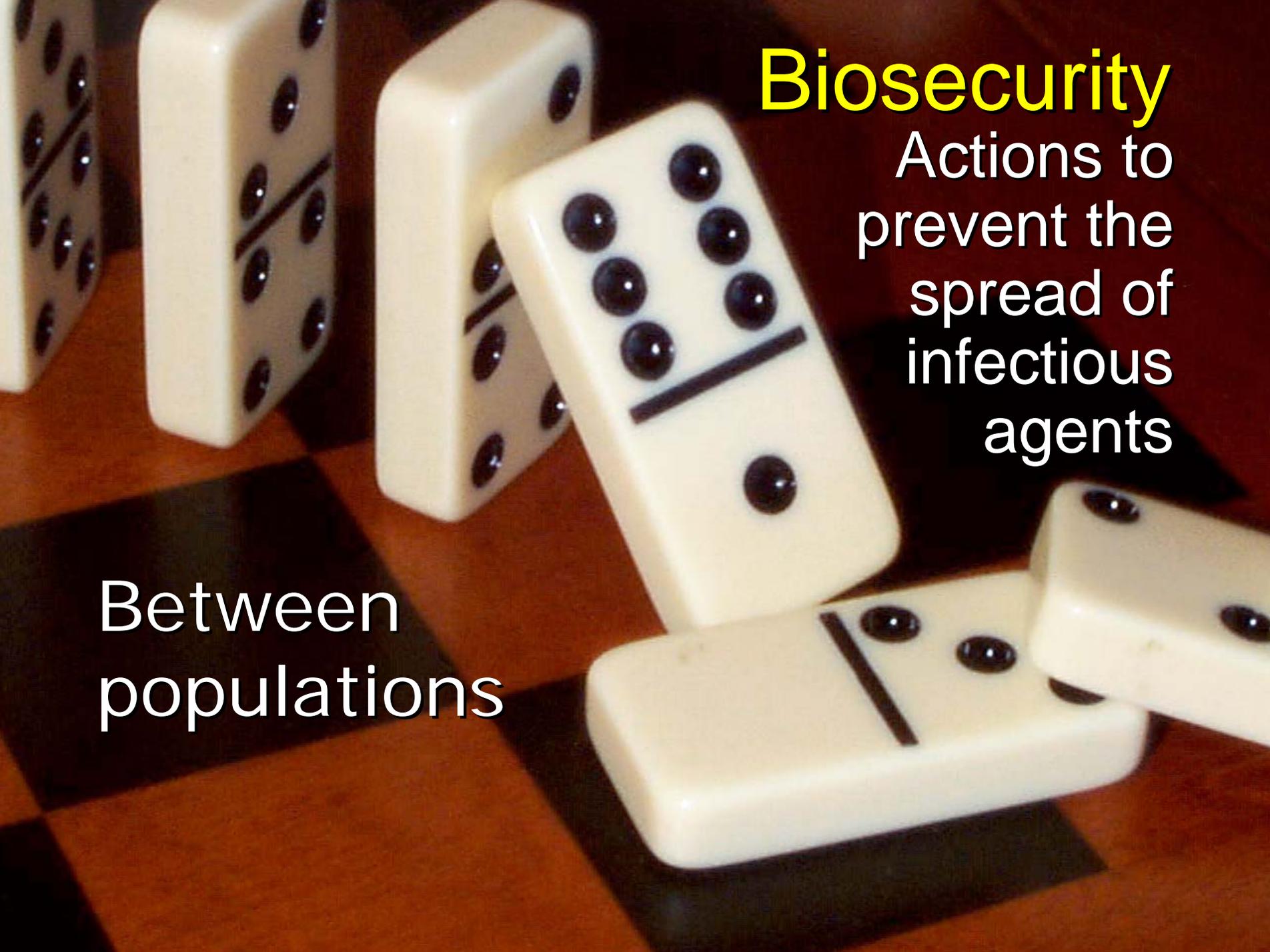
**David R. Smith, DVM, PhD
University of Nebraska-Lincoln**



Risk analysis

- Risk Assessment
 - What am I afraid of?
 - How likely is that?
 - What is the impact if it happens?
- Risk Management
 - What can be done to reduce probability or impact?
 - What will it cost?
 - Doing it!
- Documentation
 - Communication
 - Records

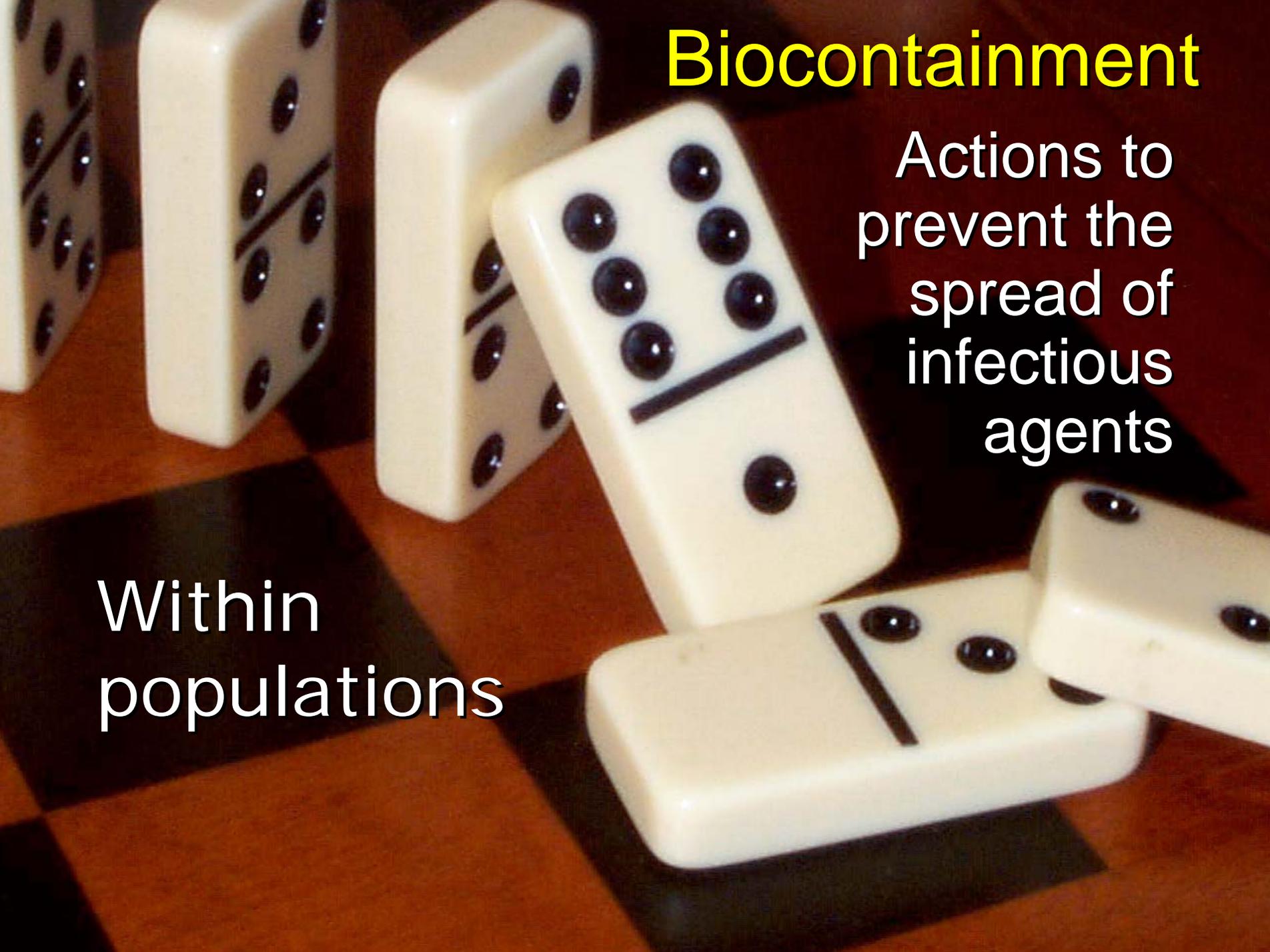




Biosecurity

Actions to
prevent the
spread of
infectious
agents

Between
populations

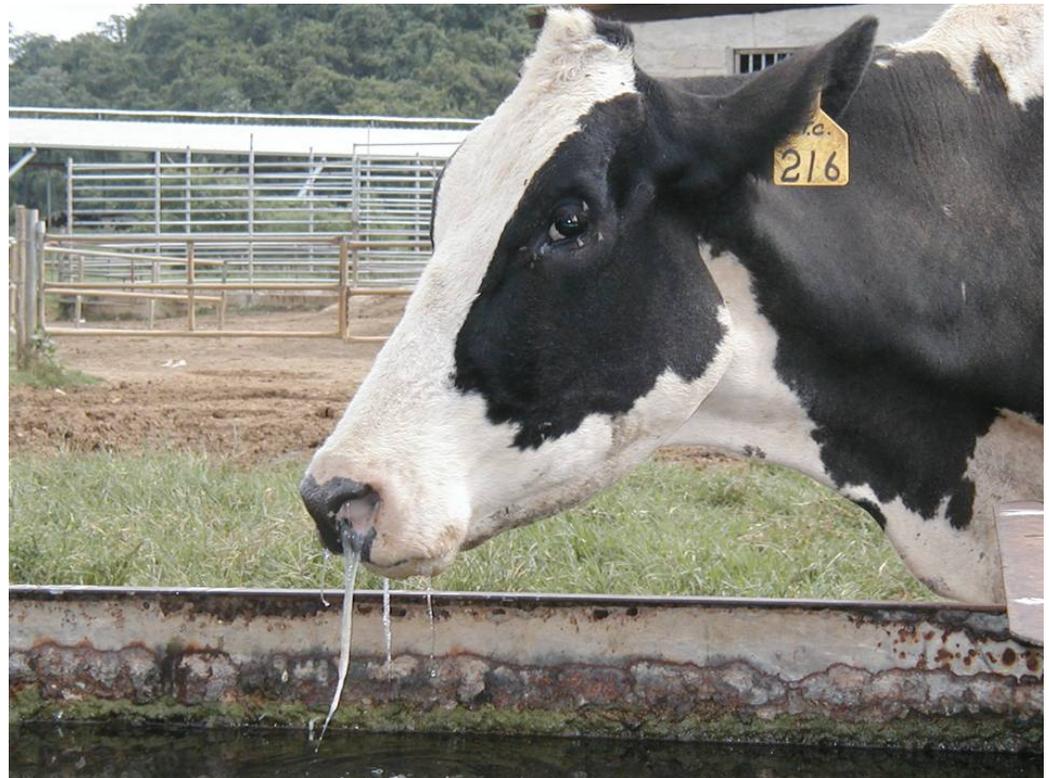
A row of white dominoes on a wooden surface. The dominoes are arranged in a line, and the one in the center is falling, toppling the others. The dominoes have black dots and a black line. The background is a dark brown wooden surface.

Biocontainment

Actions to prevent the spread of infectious agents

Within populations

Prevent Effective Contacts



physical separation
minimize contact time
minimize dose-load

Increase host resistance

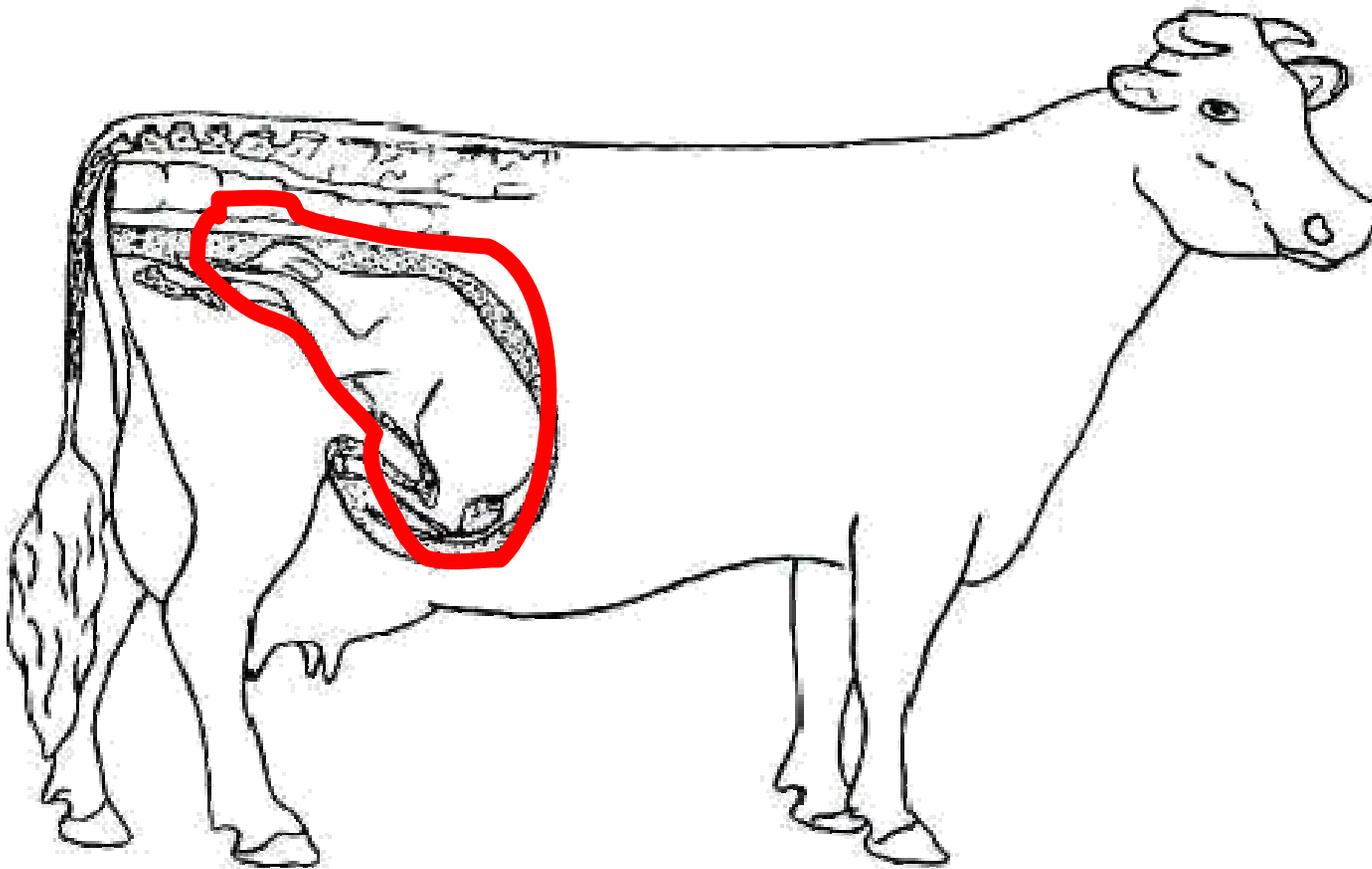


Remove / prevent entry of the agent

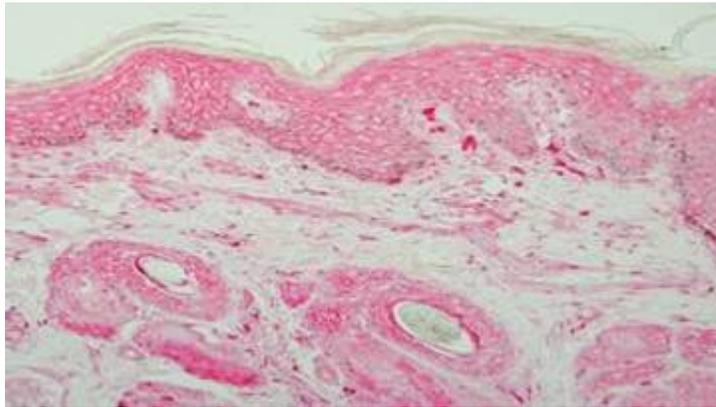


There's uncertainty in buying cows even from our neighbors.

Remove / prevent entry of the agent



Outcomes of fetal infection



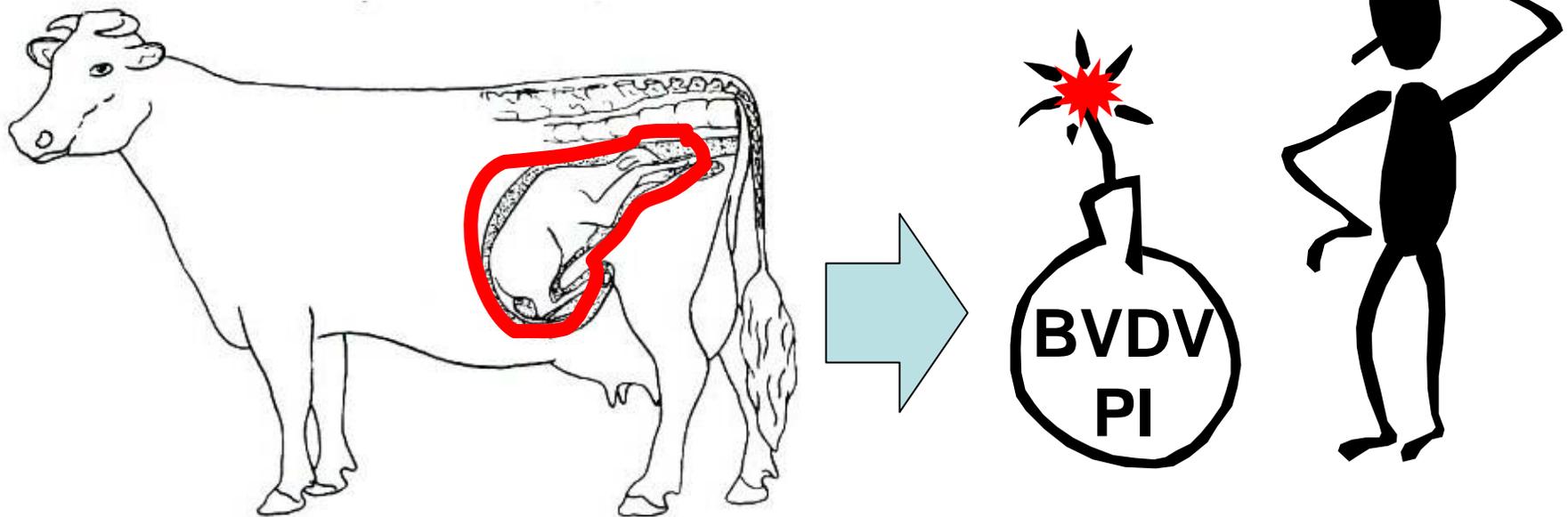
Abortion

Brain and other abnormalities

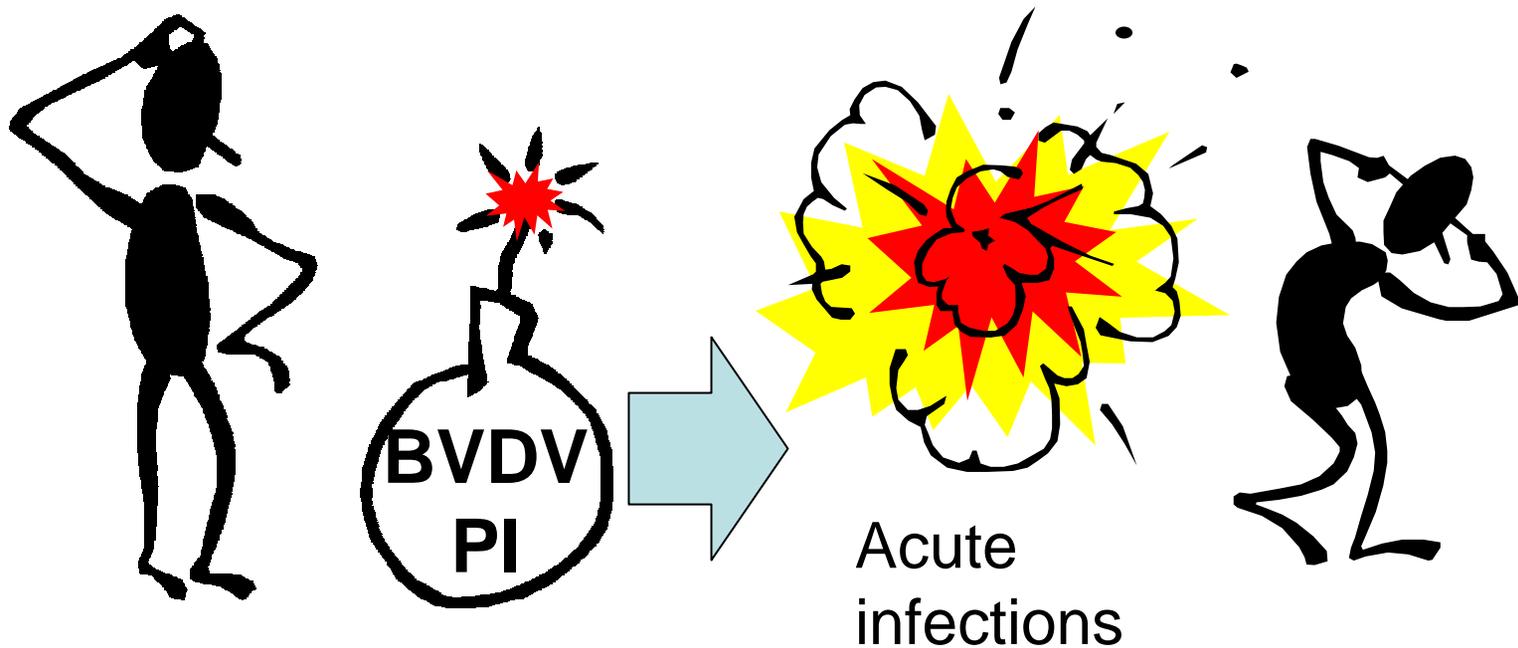
Persistent- infection

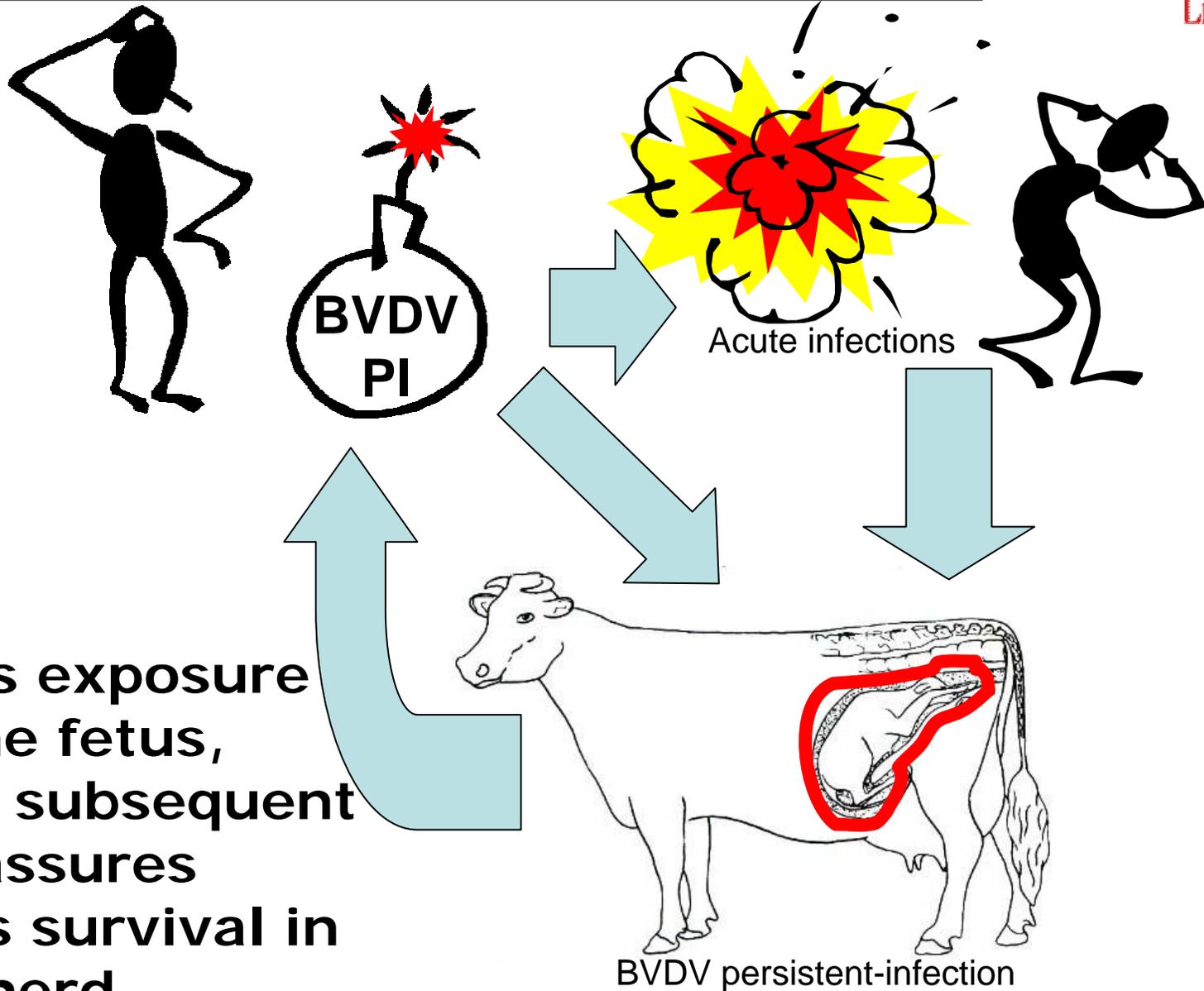


Transient BVDV infection of the dam may result in the birth of a BVDV persistently-infected (PI) calf



The PI animal is the primary source of BVDV exposure to the herd





**Virus exposure
of the fetus,
with subsequent
PI, assures
virus survival in
the herd**

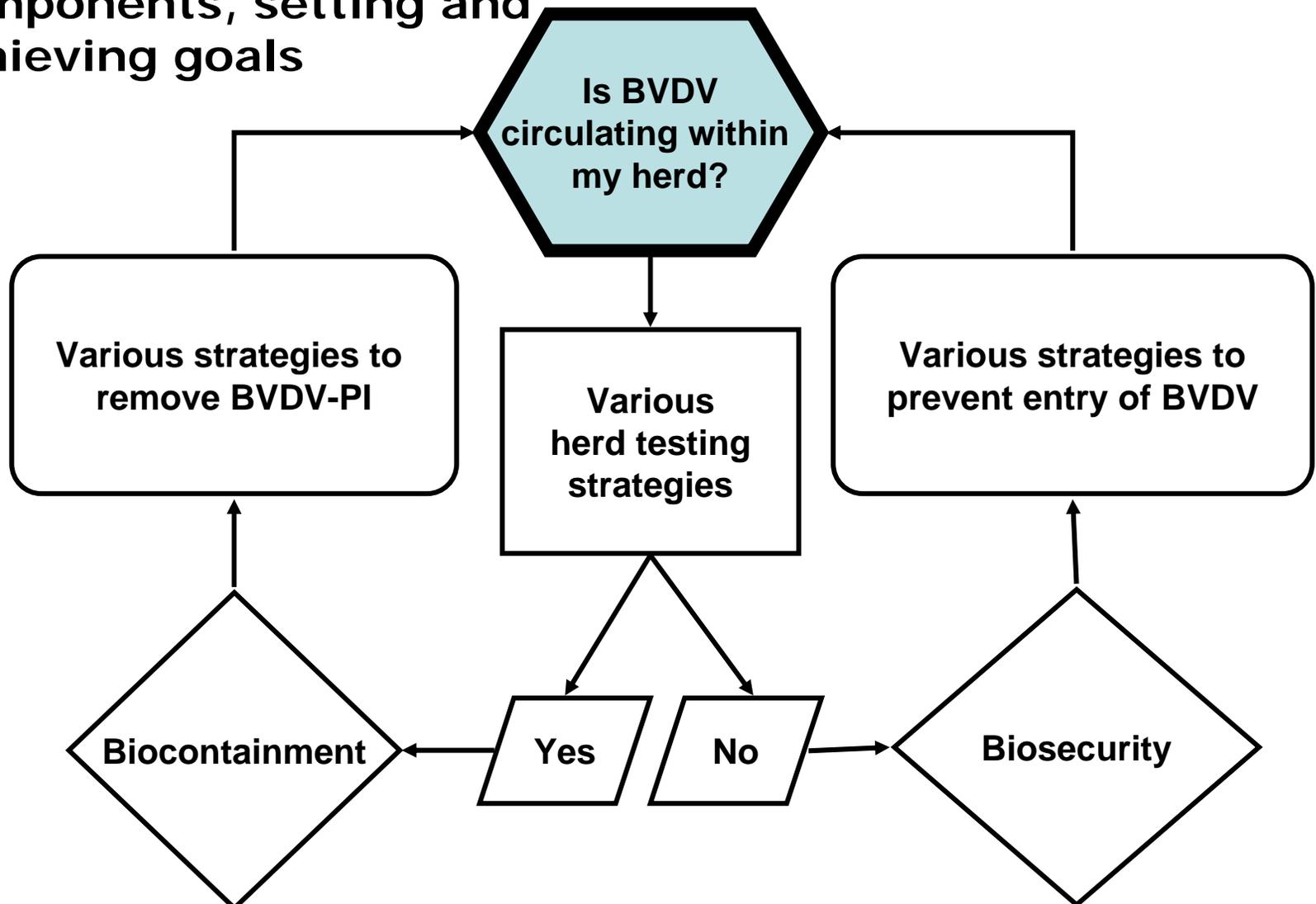


The role of
the PI calf...

...in BVDV
survival from
year to year

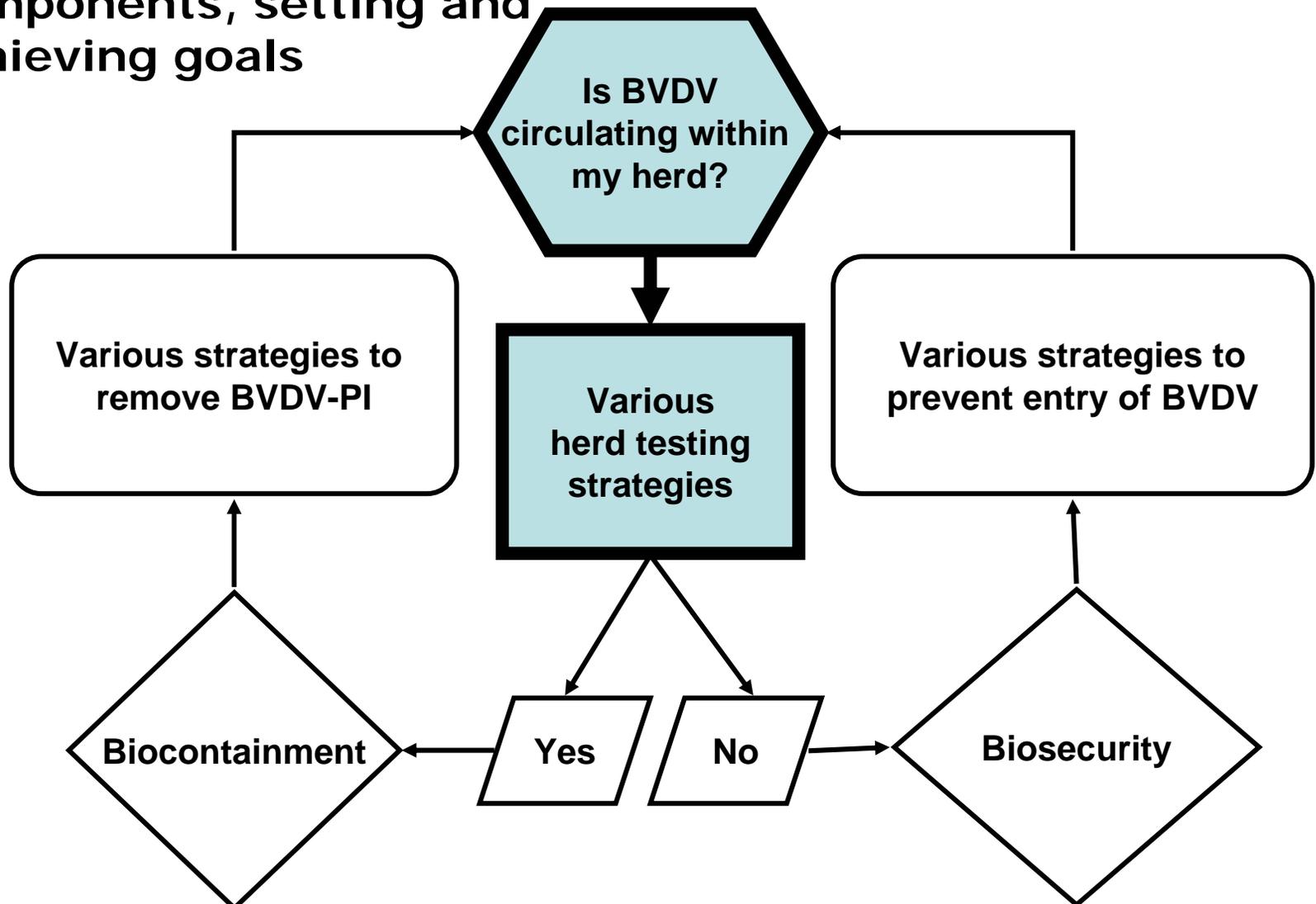
BVDV control plans

components, setting and achieving goals



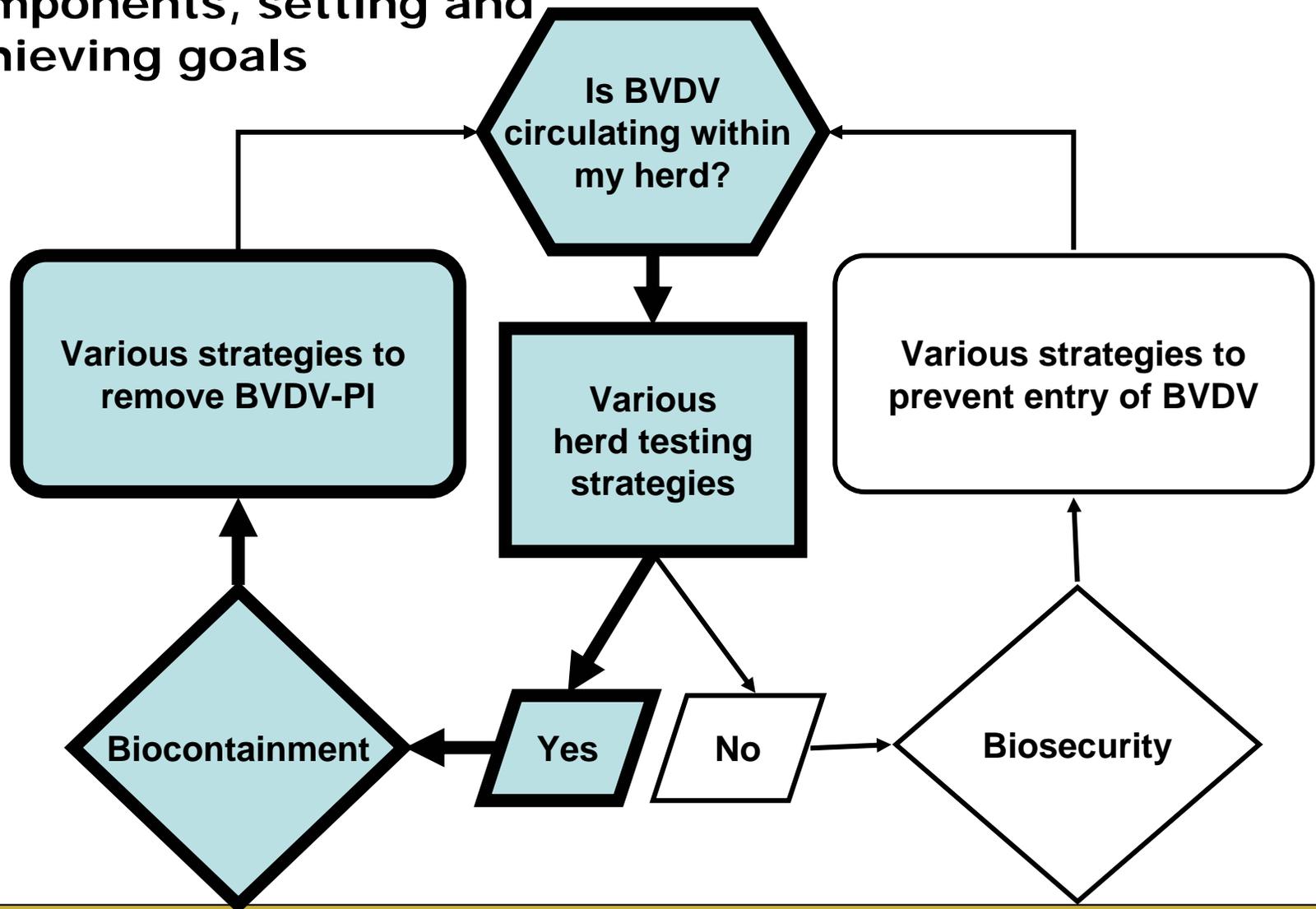
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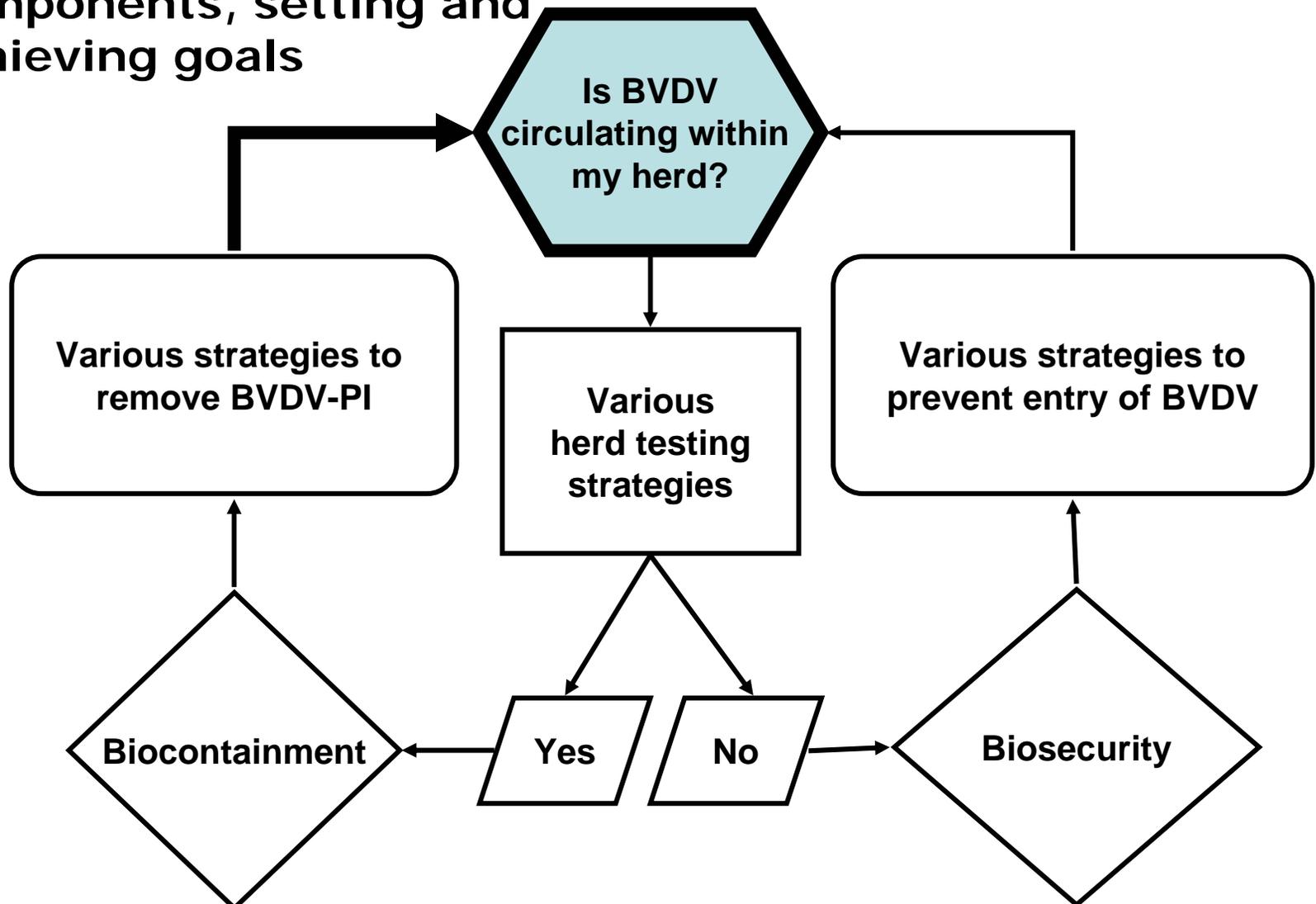
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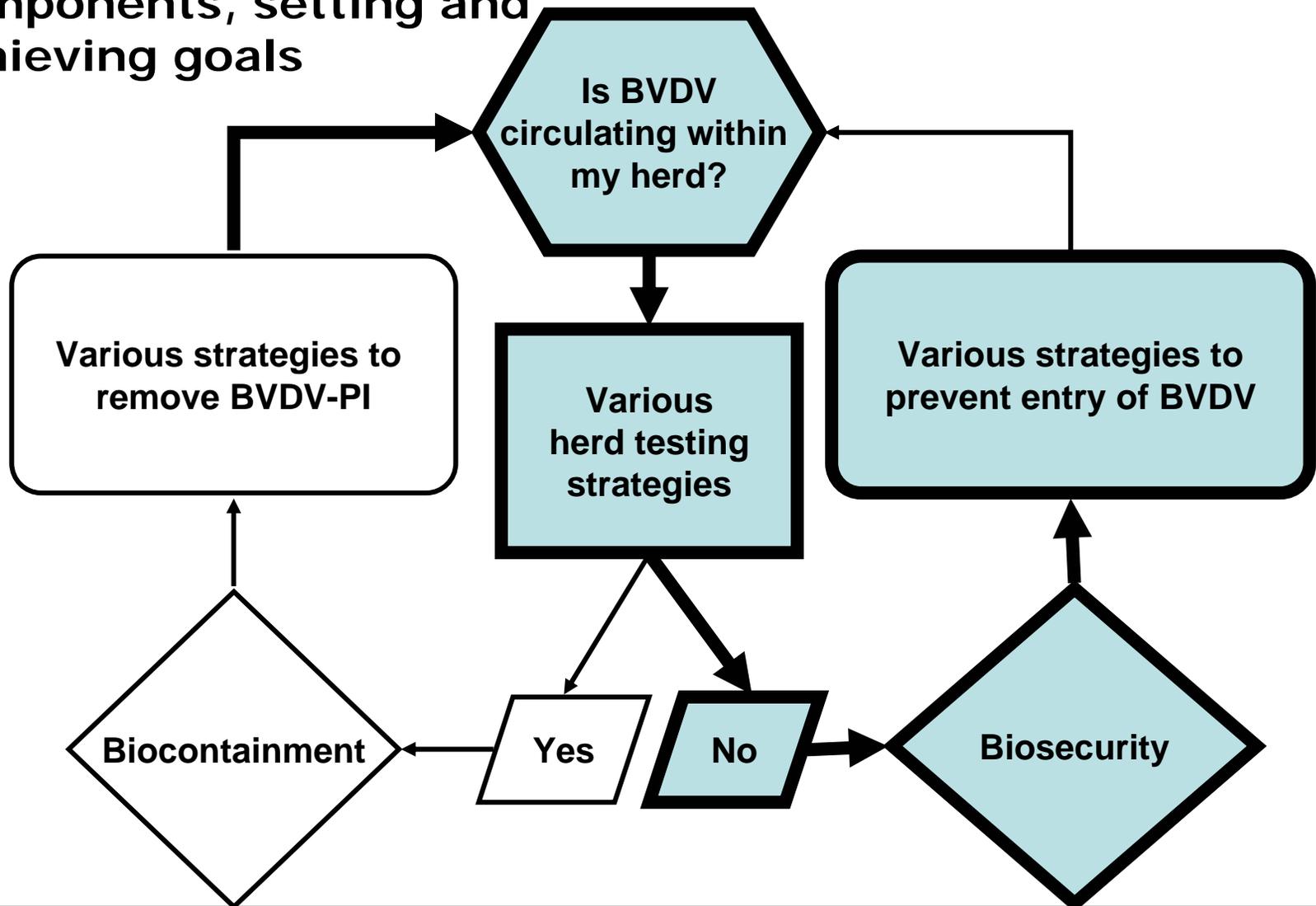
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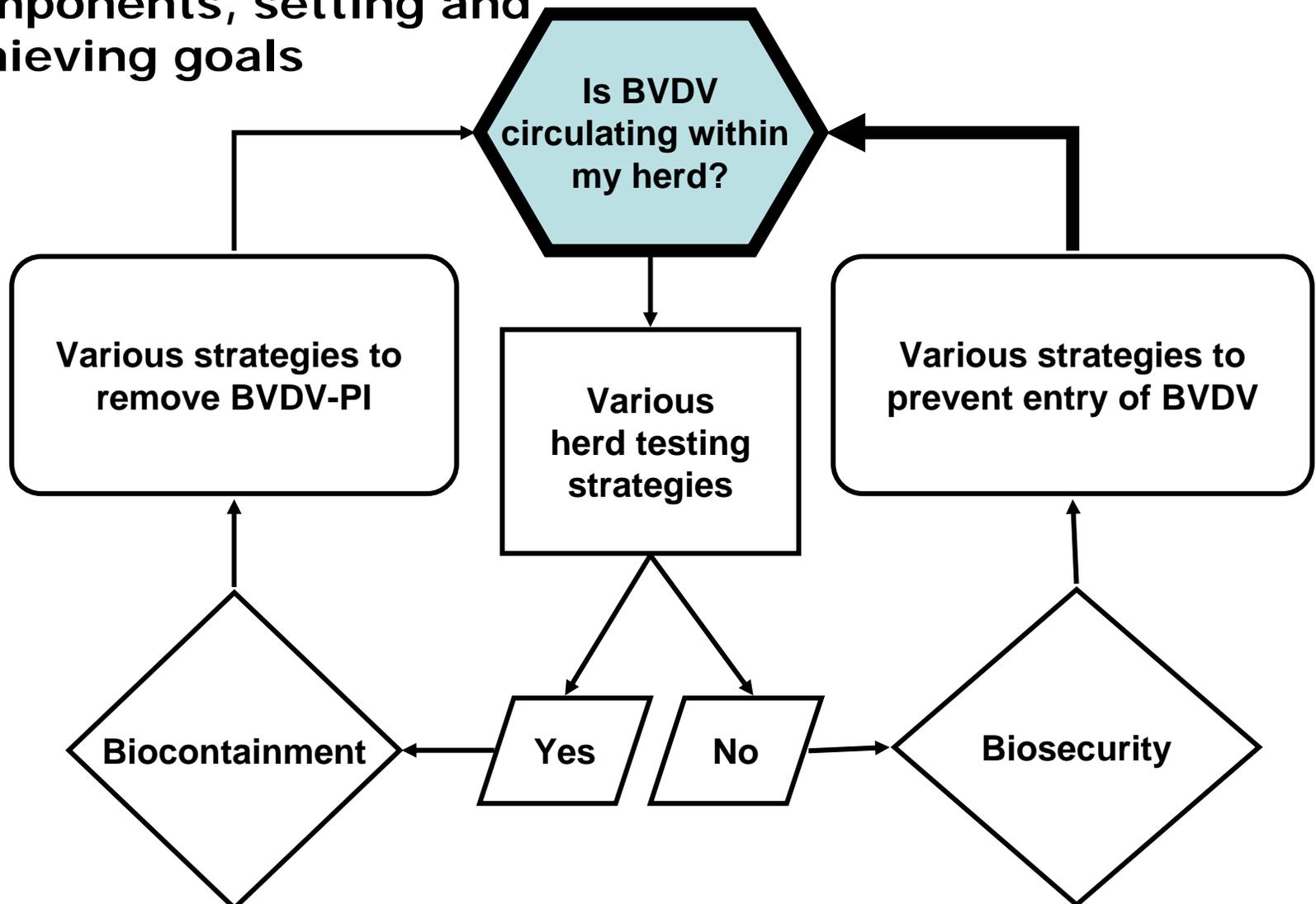
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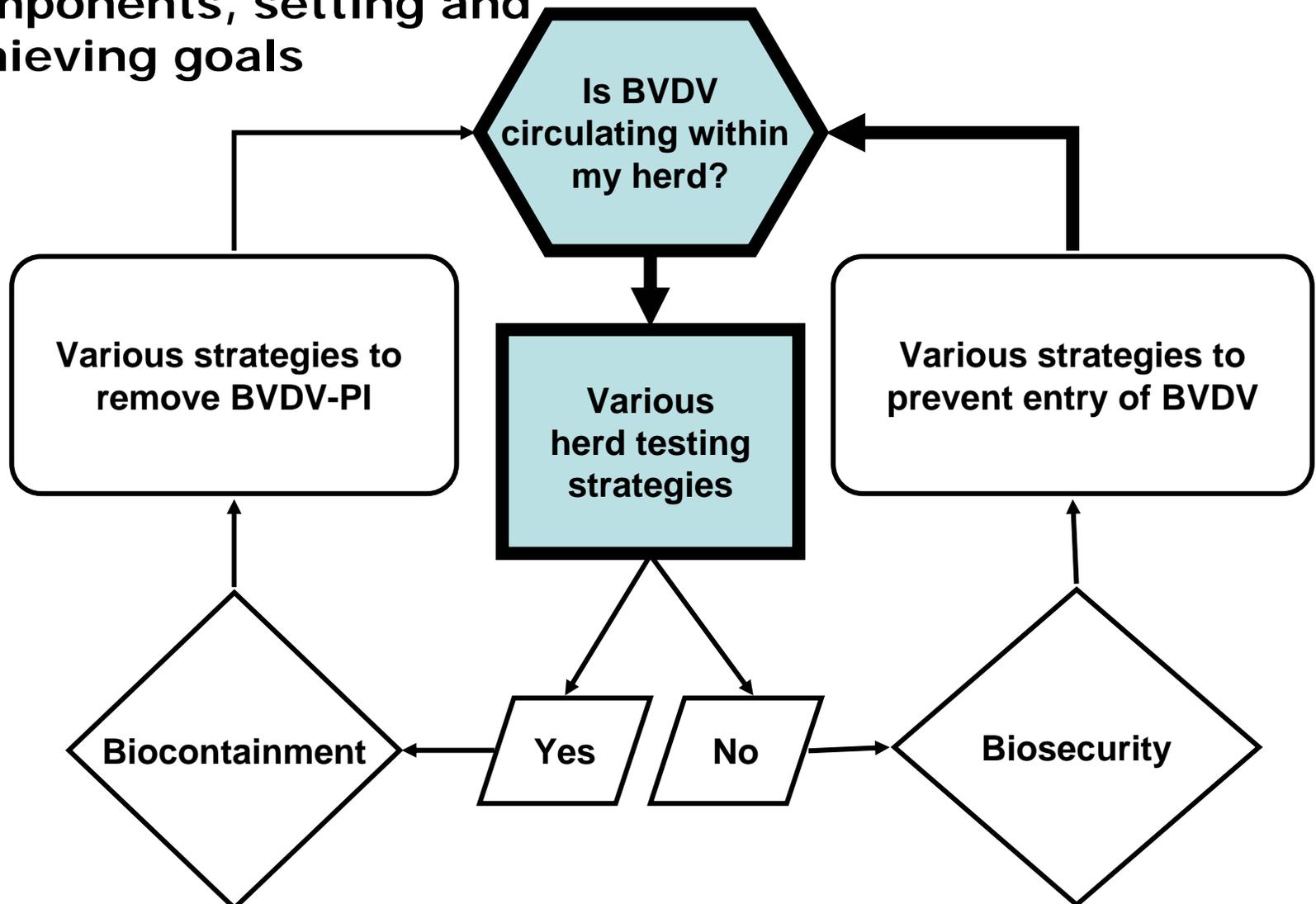
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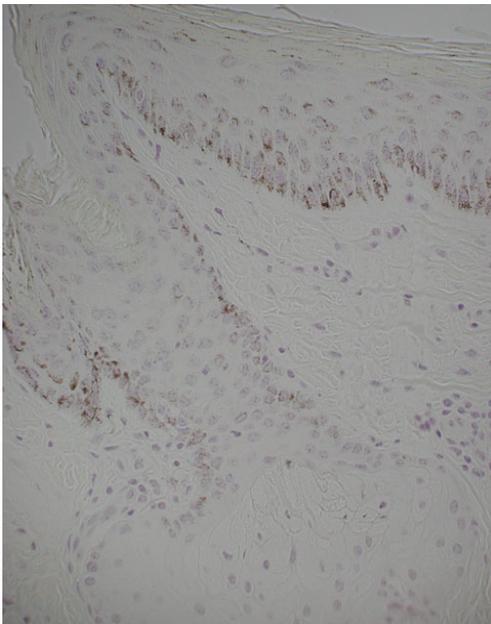
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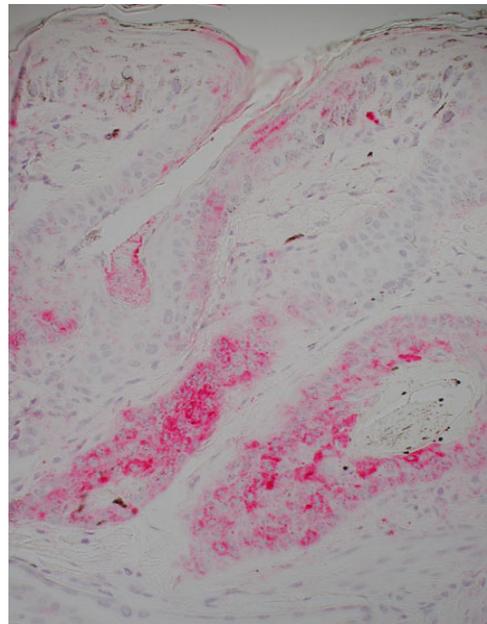


Why test?

- Determine the status of the **herd**
- Determine the status of **individuals** within the herd to eliminate BVDV PI cattle



Negative

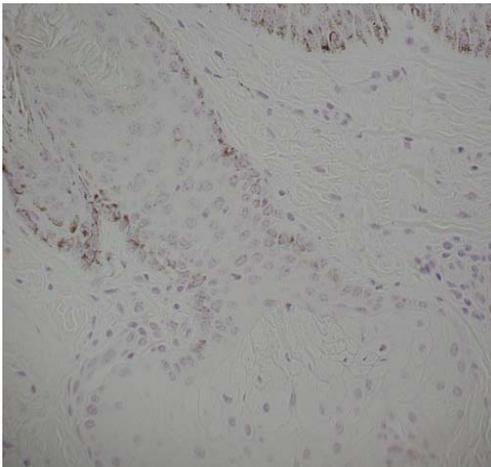


Positive

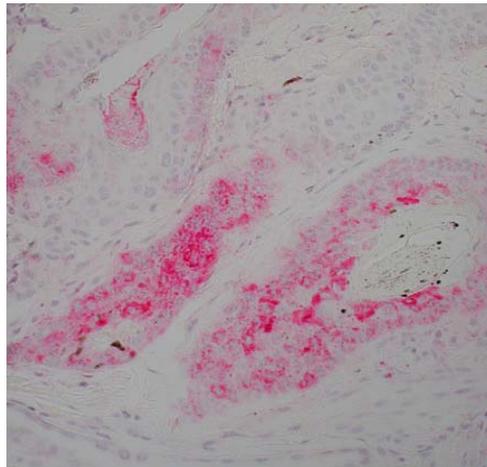
**Microscopic examination
of skin stained for BVD
virus**

How to Test the HERD

- “Hunches” on herd status don’t work
- Diagnostic test methods are available to do the job very well –no longer a limitation
- Current research is how to do the job for less money
- Don’t sacrifice performance for price



Negative

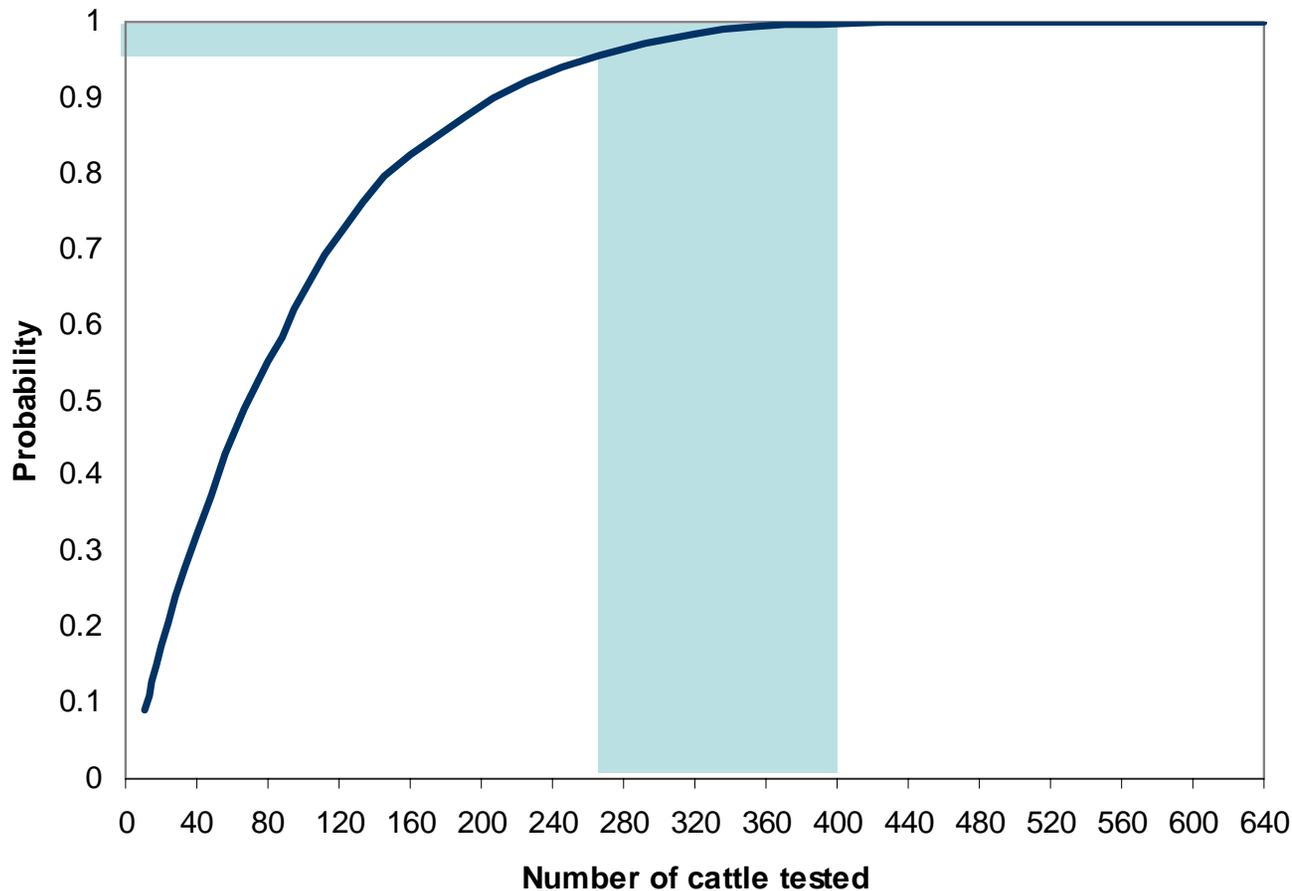


Positive

**Microscopic examination
of skin stained for BVD
virus**

Example: probability of finding one or more BVDV-PI

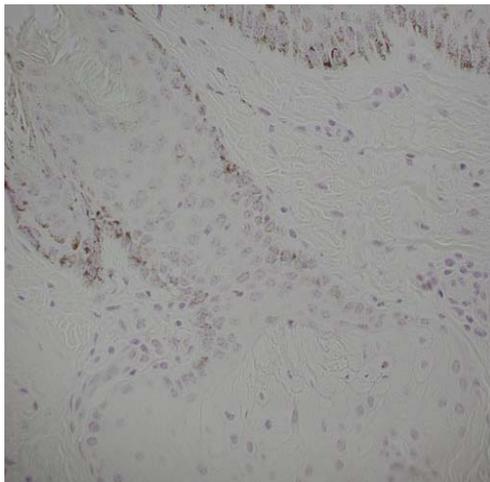
- 640 cow herd with 6 BVDV-PI
- Perfect test



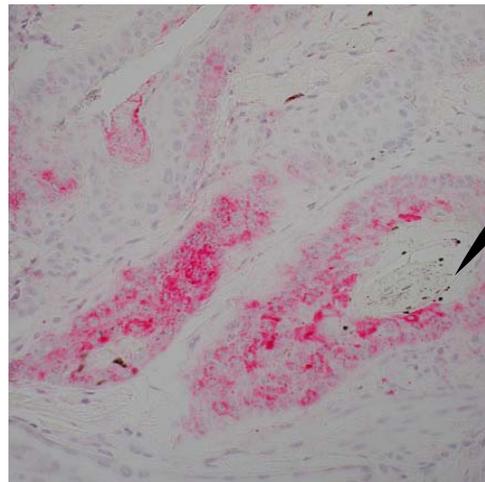
How to test for PI individuals

Need diagnostic evidence representing the entire herd

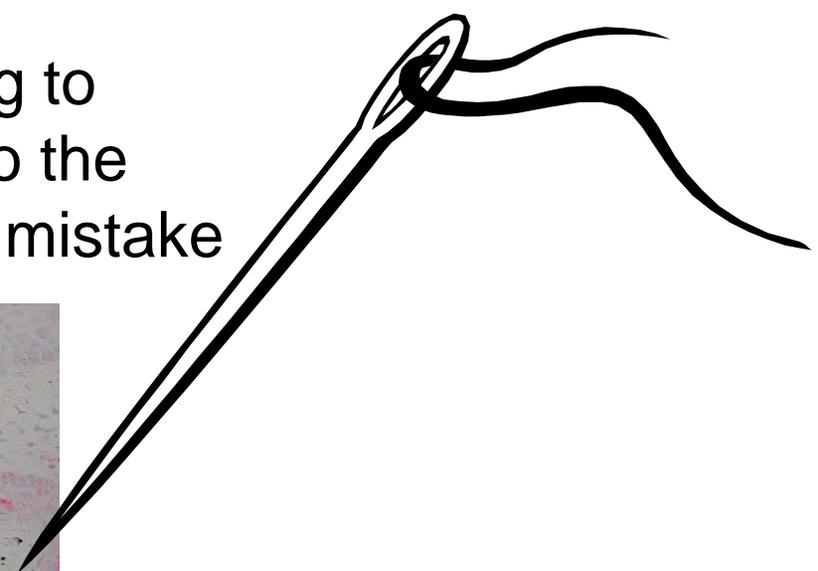
Regardless of test method, failing to identify all BVDV-PI cattle prior to the breeding season is a very costly mistake



Negative



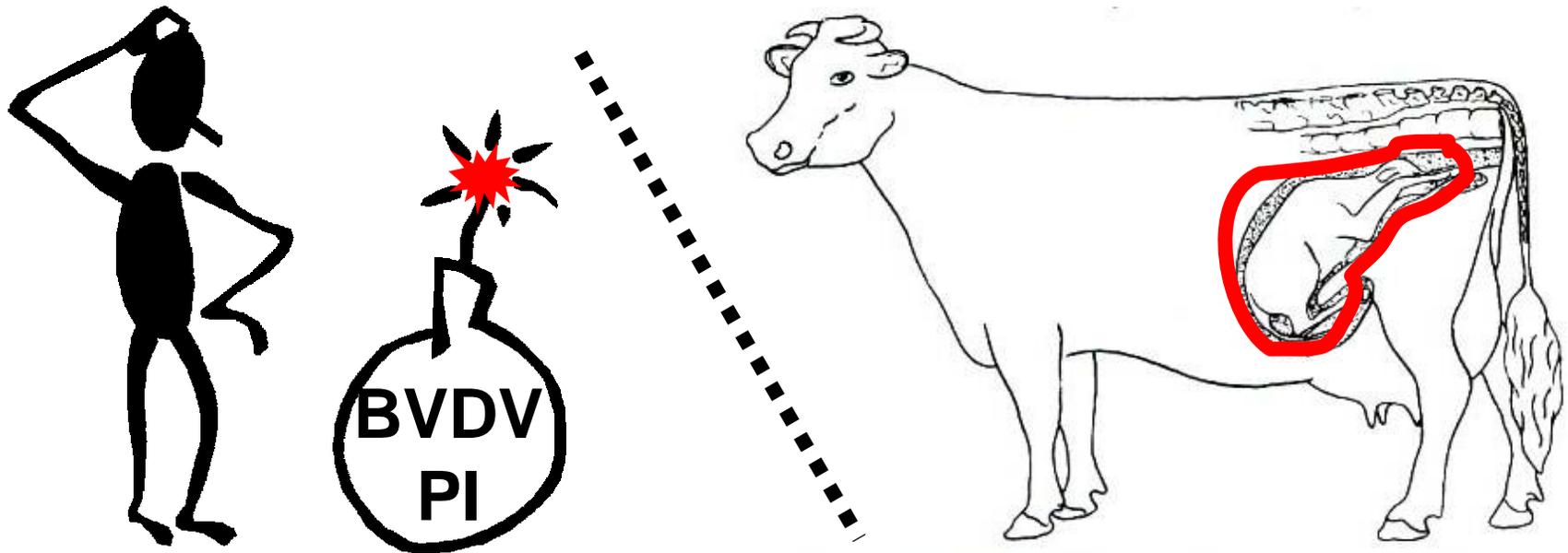
Positive



Microscopic examination of skin stained for BVD virus

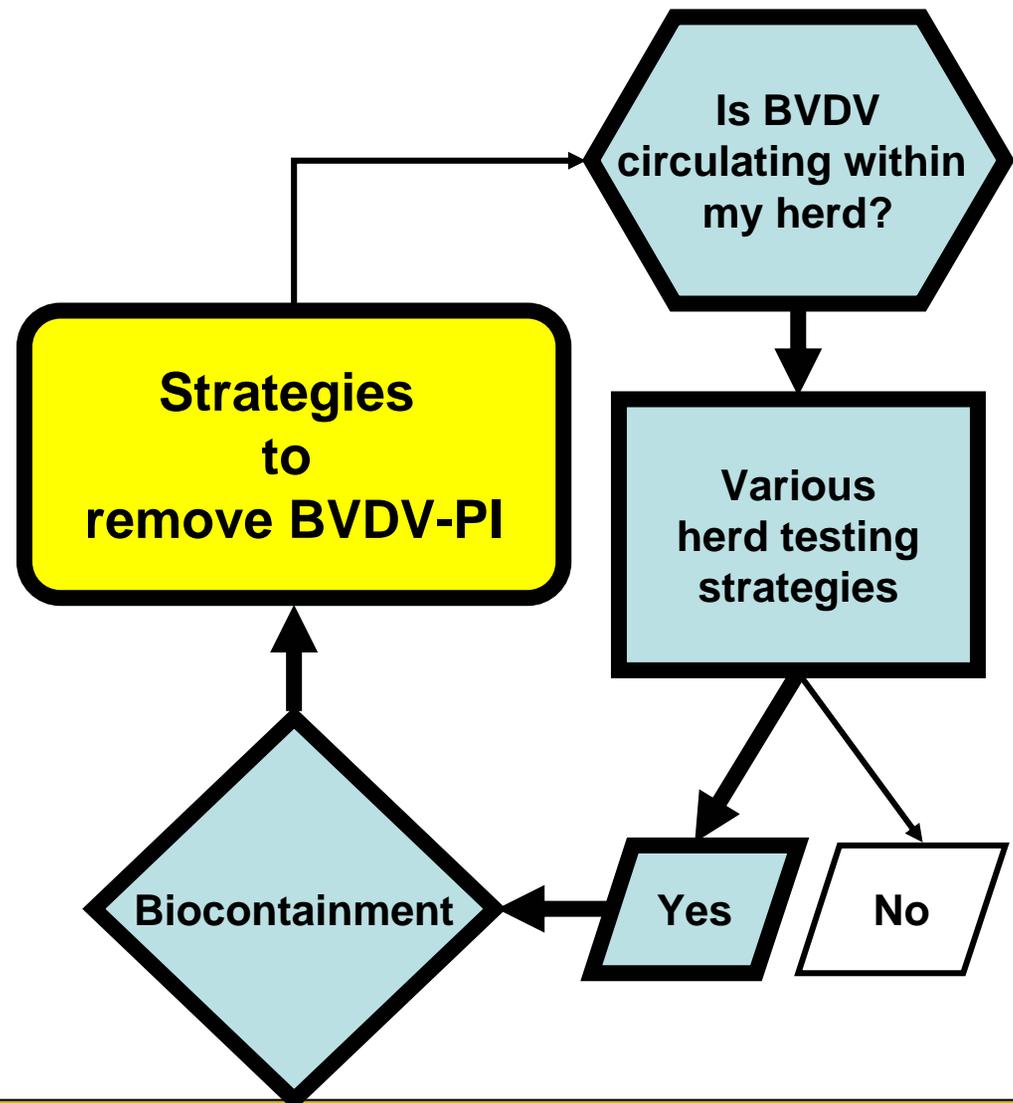
When to test?

Testing (and culling) must be completed before pregnant cattle are exposed to cattle persistently or transiently infected with BVDV



BVDV Biocontainment

- Test entire herd and remove all PI animals ASAP
- Vaccinate pre-breeding
- Protect the pregnant cow herd from other BVDV exposures





Year 1



Year 2



Year 3...

**Find and
destroy the
PI calf(s)...
vaccinate and
protect the
cow herd...**

**...stop BVDV
transmission
from year to
year**

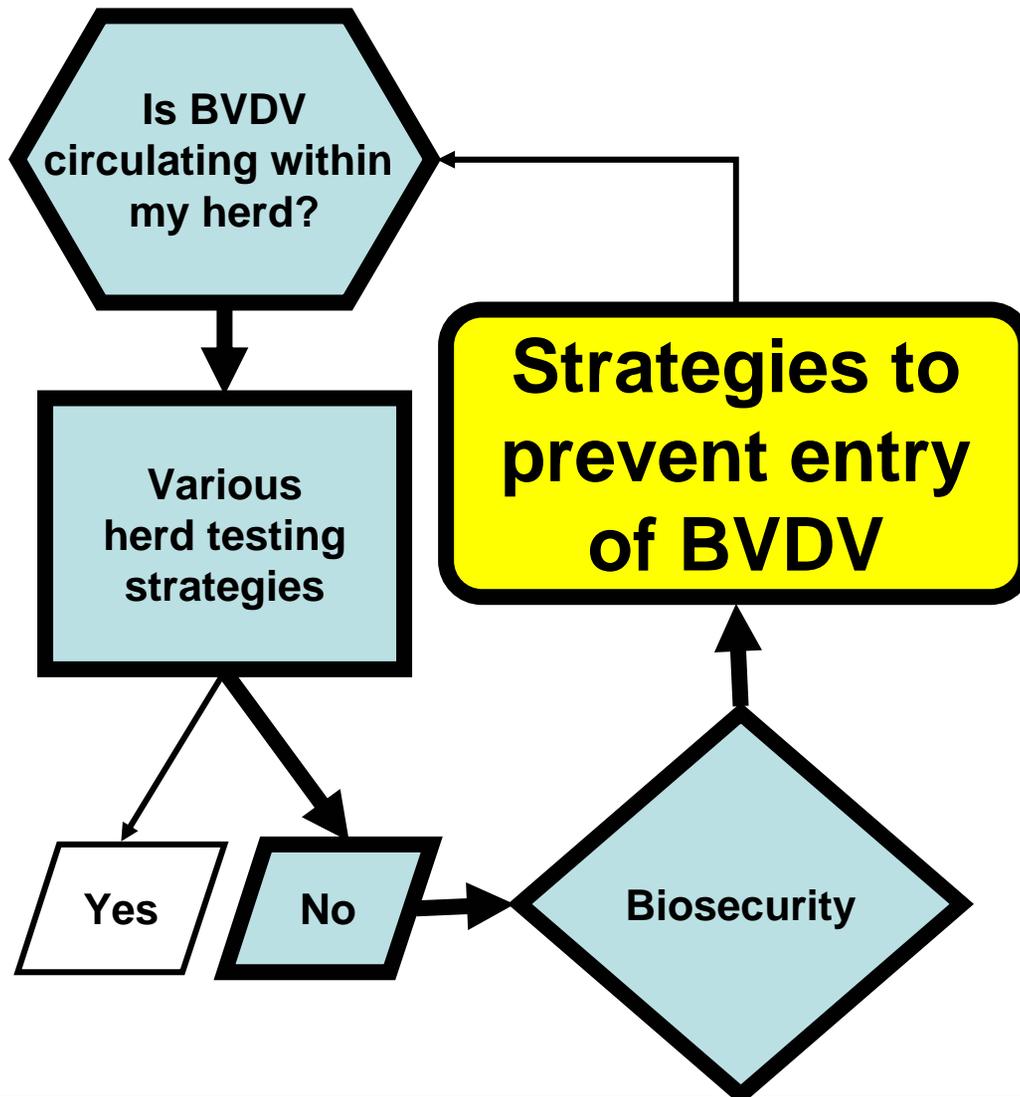


**Find and
destroy the
PI calf(s)...
vaccinate and
protect the
cow herd...**

**...stop BVDV
transmission
from year to
year**



BVDV Biosecurity



Vaccinate pre-breeding

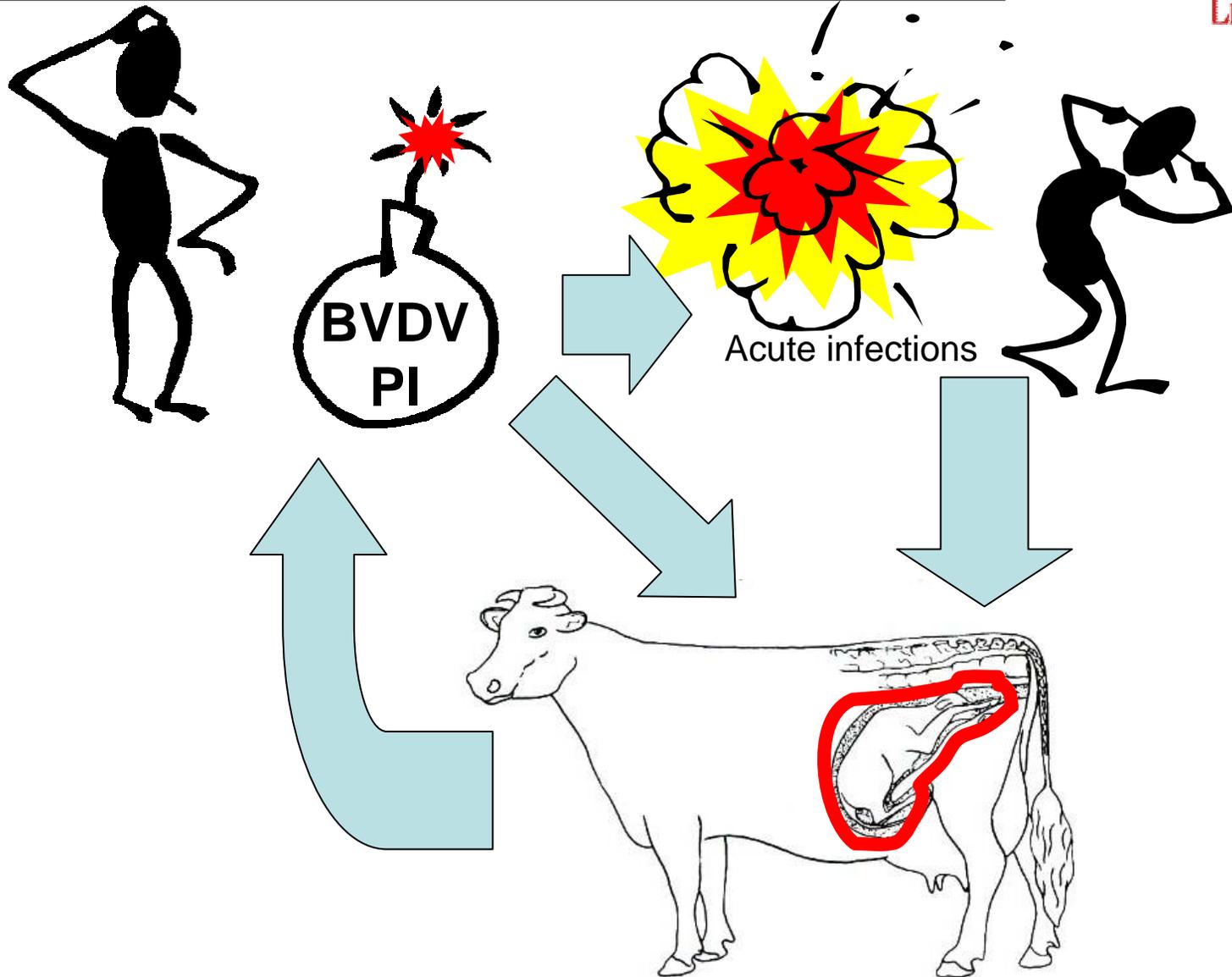
Quarantine new additions and test for PI

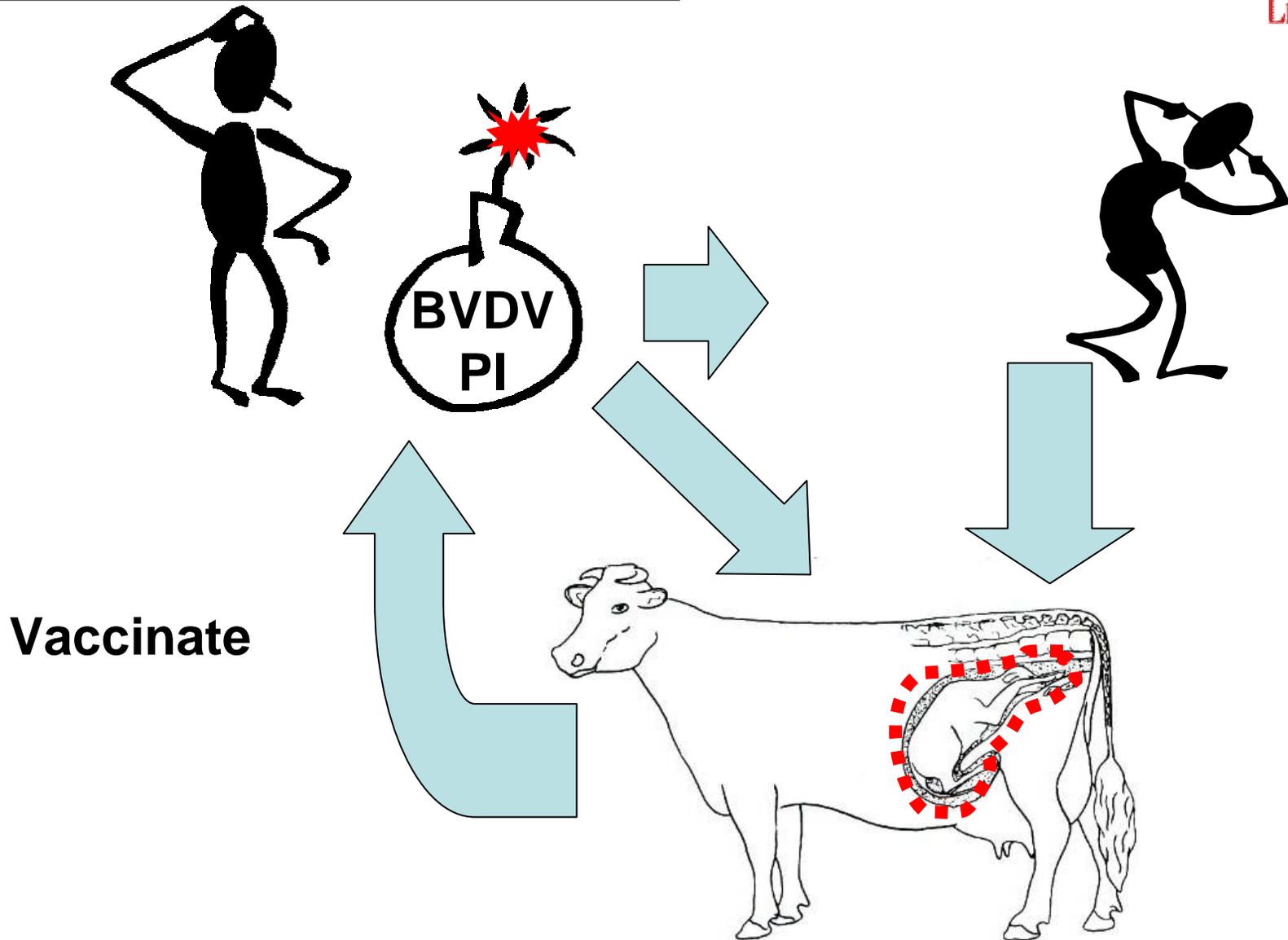
Protect pregnant cow herd from exposure – calves born to new additions

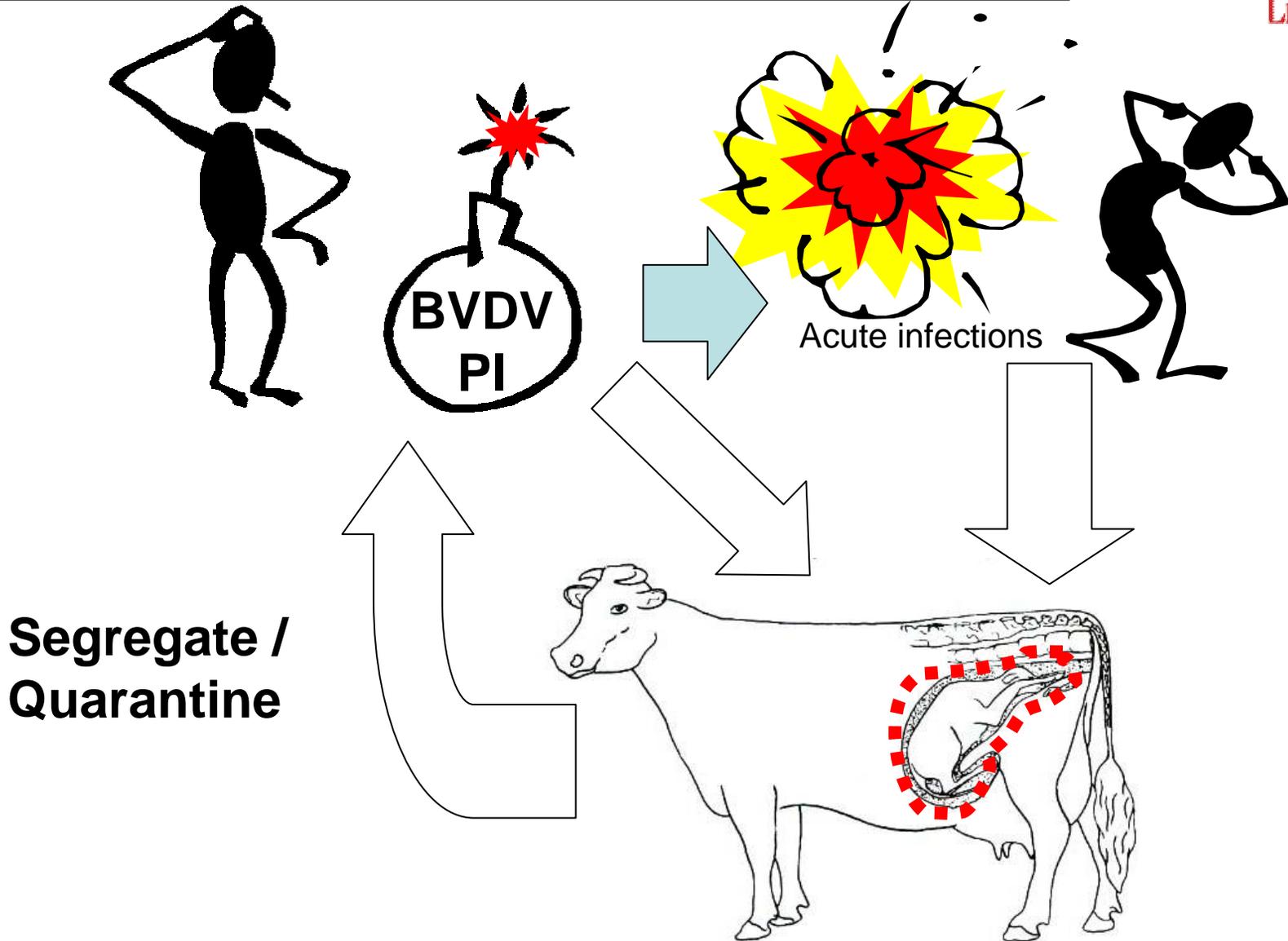
Remove / prevent entry of the agent



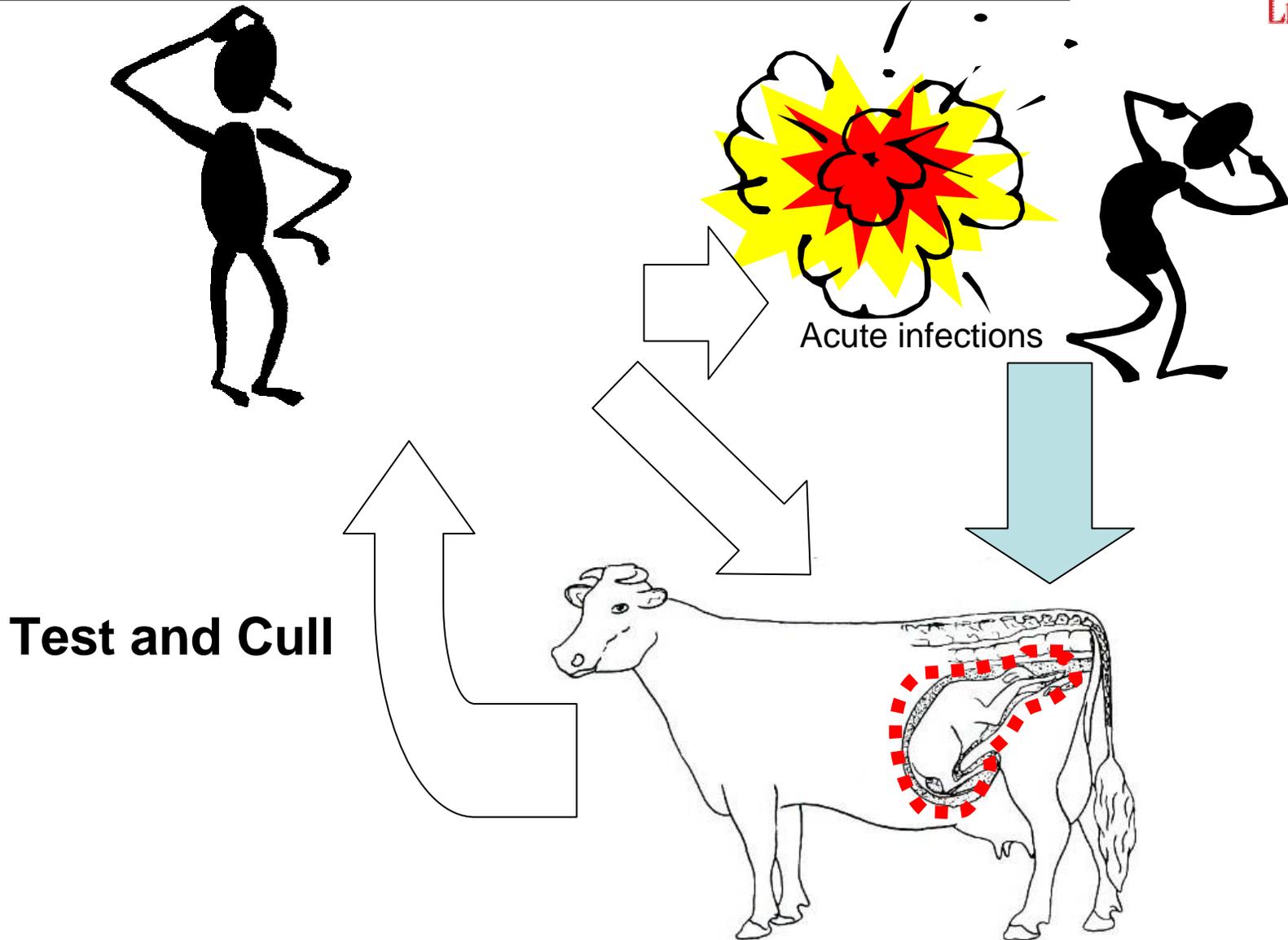
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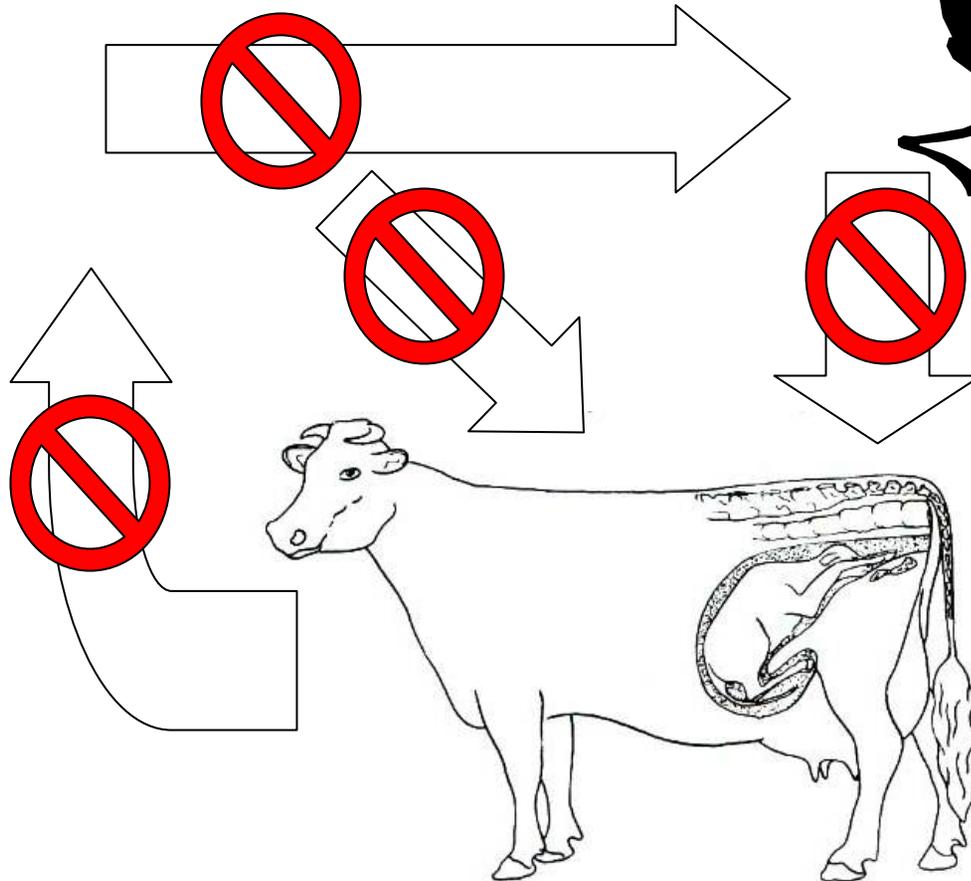
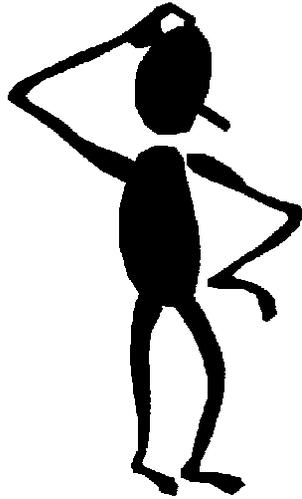






**Segregate /
Quarantine**



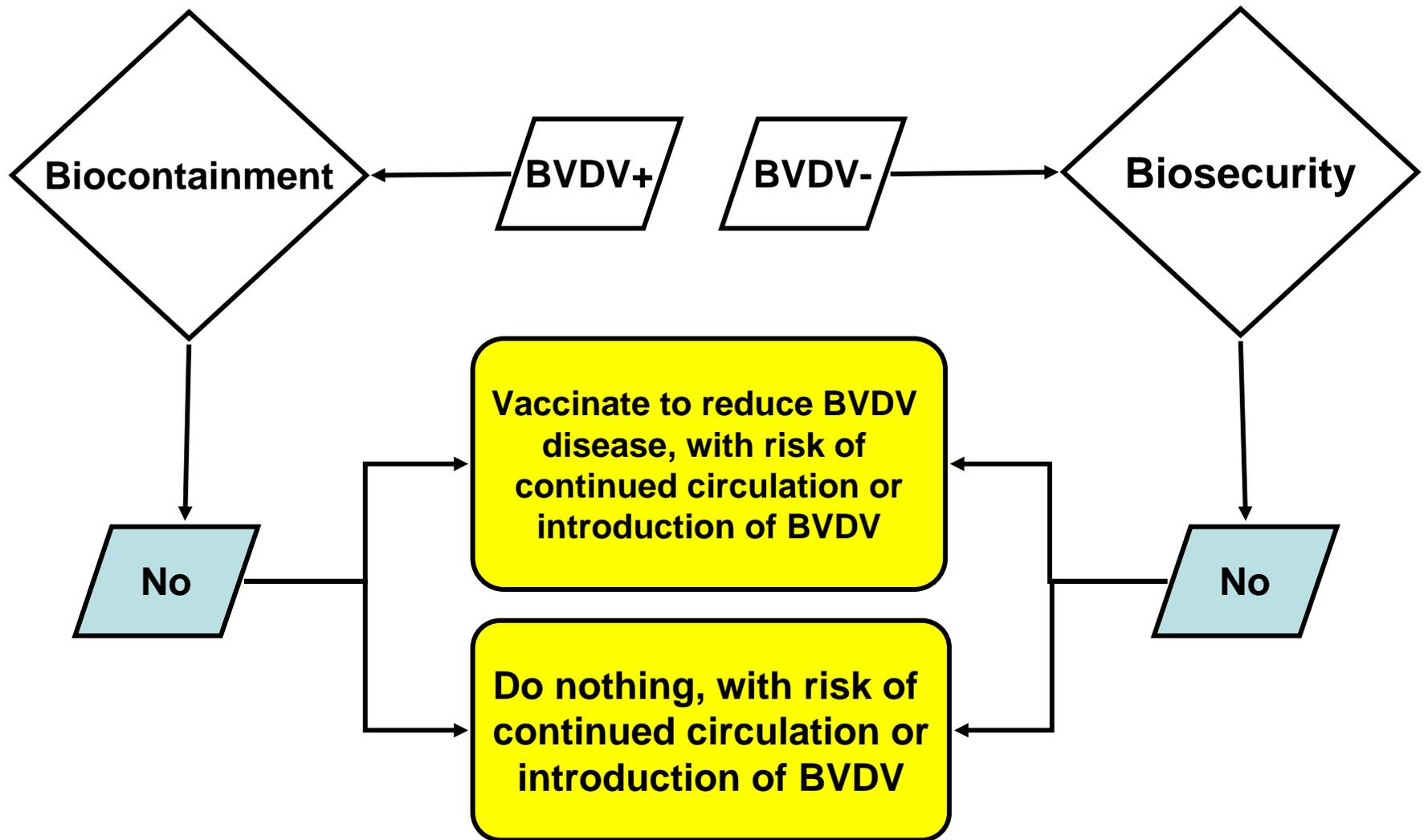


Vaccinate

**Segregate /
Quarantine**

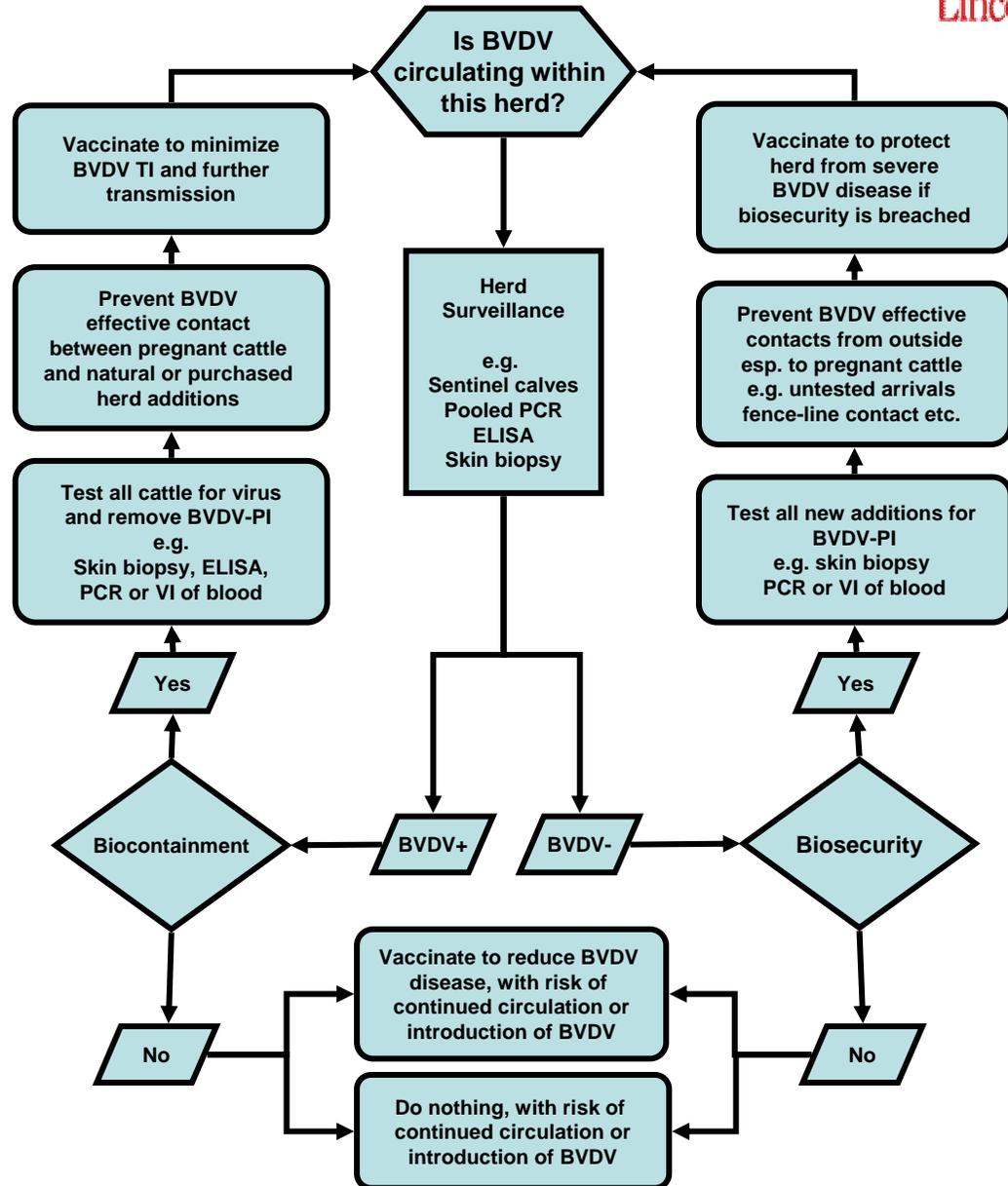
Test and Cull

Choices...



**BVDV
control is
possible**

**The decision
to do it is
yours...**



Thank you!

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