

Poultry Health Seminar, continued

Post mortem & Biosecurity

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Is post-mortem an option? – movie #1



Is post-mortem an option? – movie #2





“Dysbacteriosis” evaluation

- Signs of decreased intestinal health

Avian Pathology

Publication details, including instructions for authors and subscription information:

<http://www.tandfonline.com/loi/cavp20>

Morphometric evaluation of “dysbacteriosis” in broilers

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Ballooning

Maldigestion

- Dysbacteriosis?

Loss of tonus

Artefact?

Leakage tight junctions?



Abnormal contents



Foam (gas)

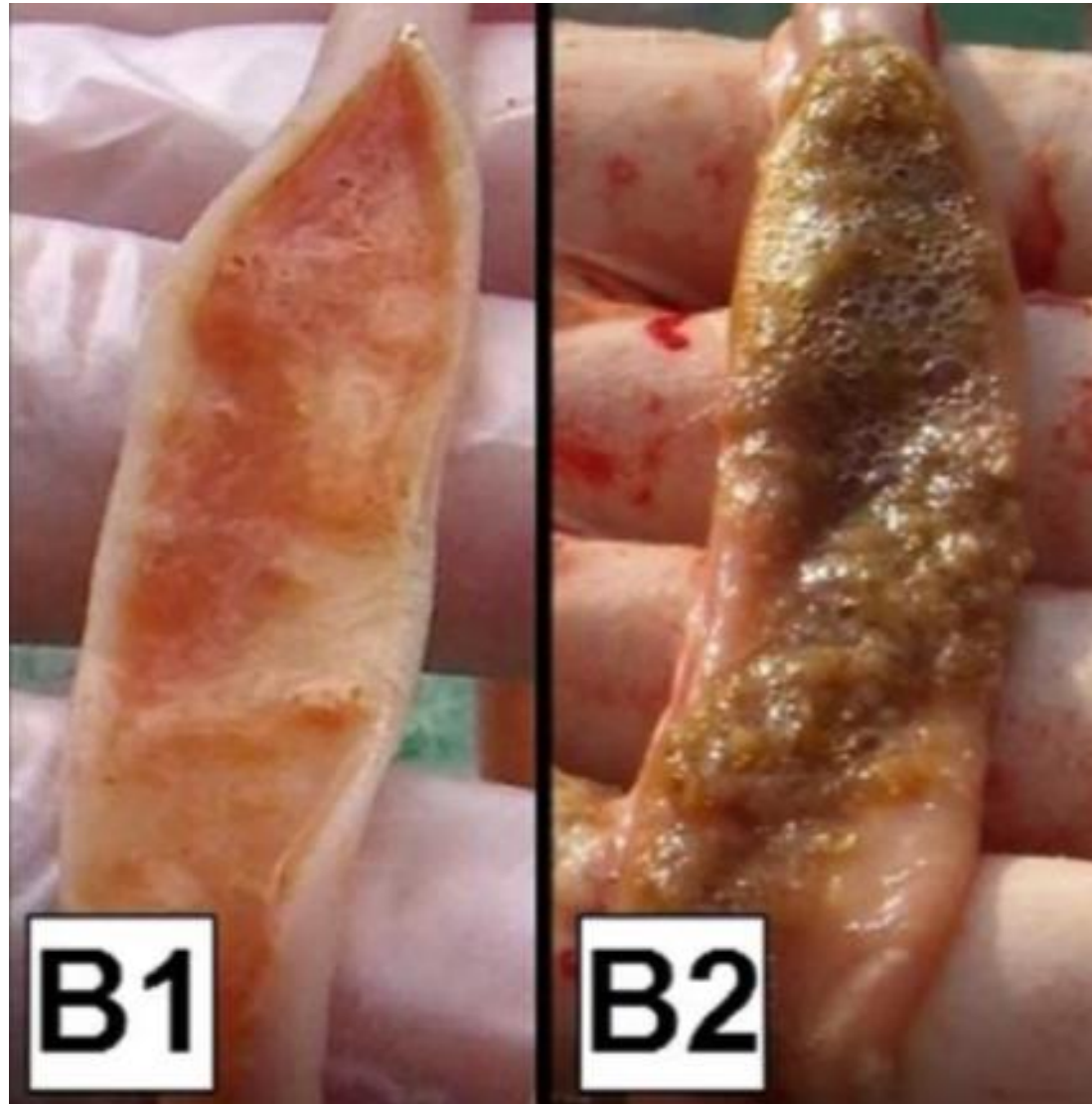
Carotene

Slime

Maldigestion

Malsecretion

Malabsorbtion



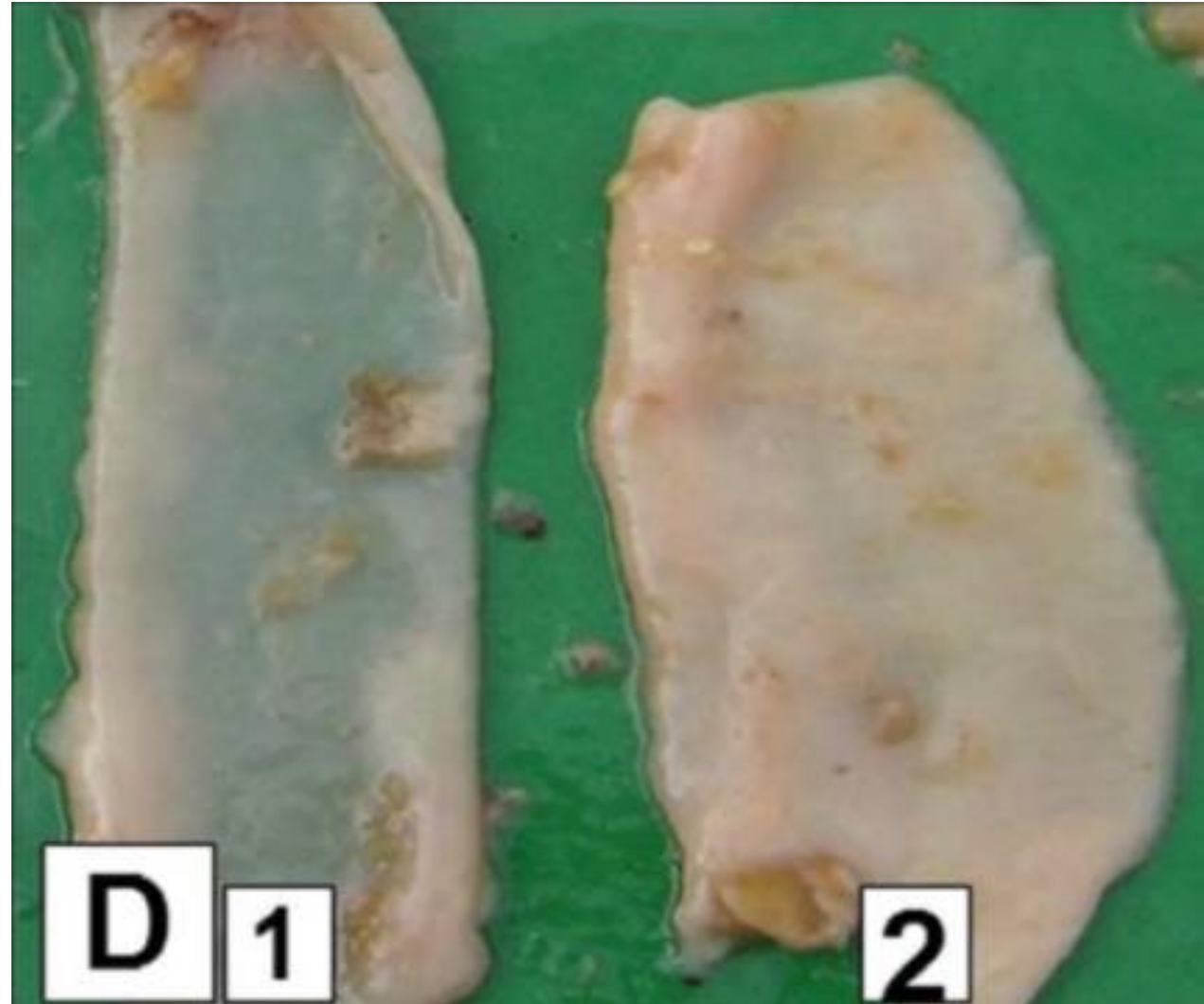
Thin gut wall

Compromised gut wall
Compromised muscular layer

Infection

Immune response

Leakage tight-junctions?



Loss of tonus

Loss function tunica muscularis

Leakage tight-junctions?



Undigested particles (colon)

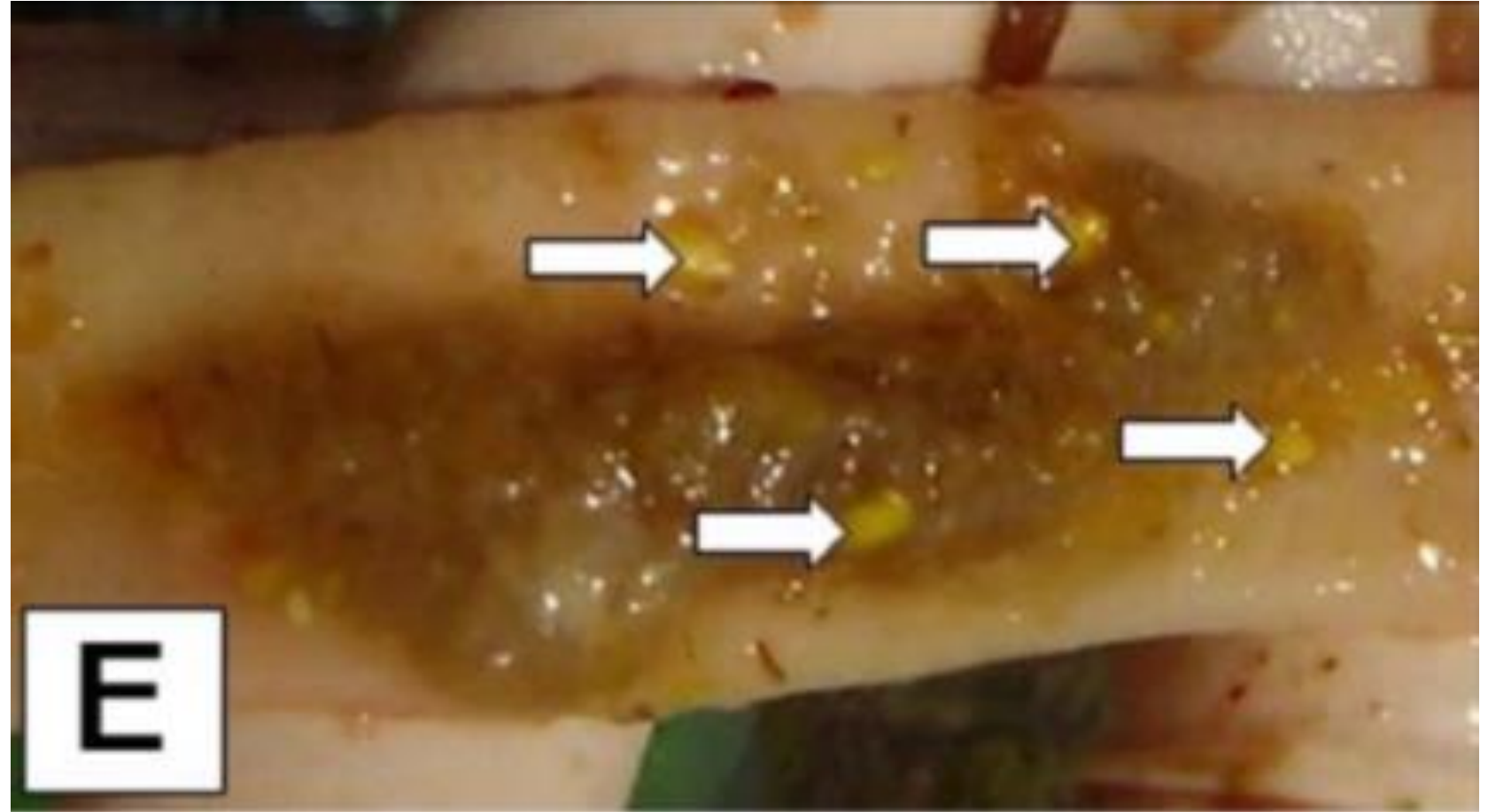


Grain

Roots

Gizzard function

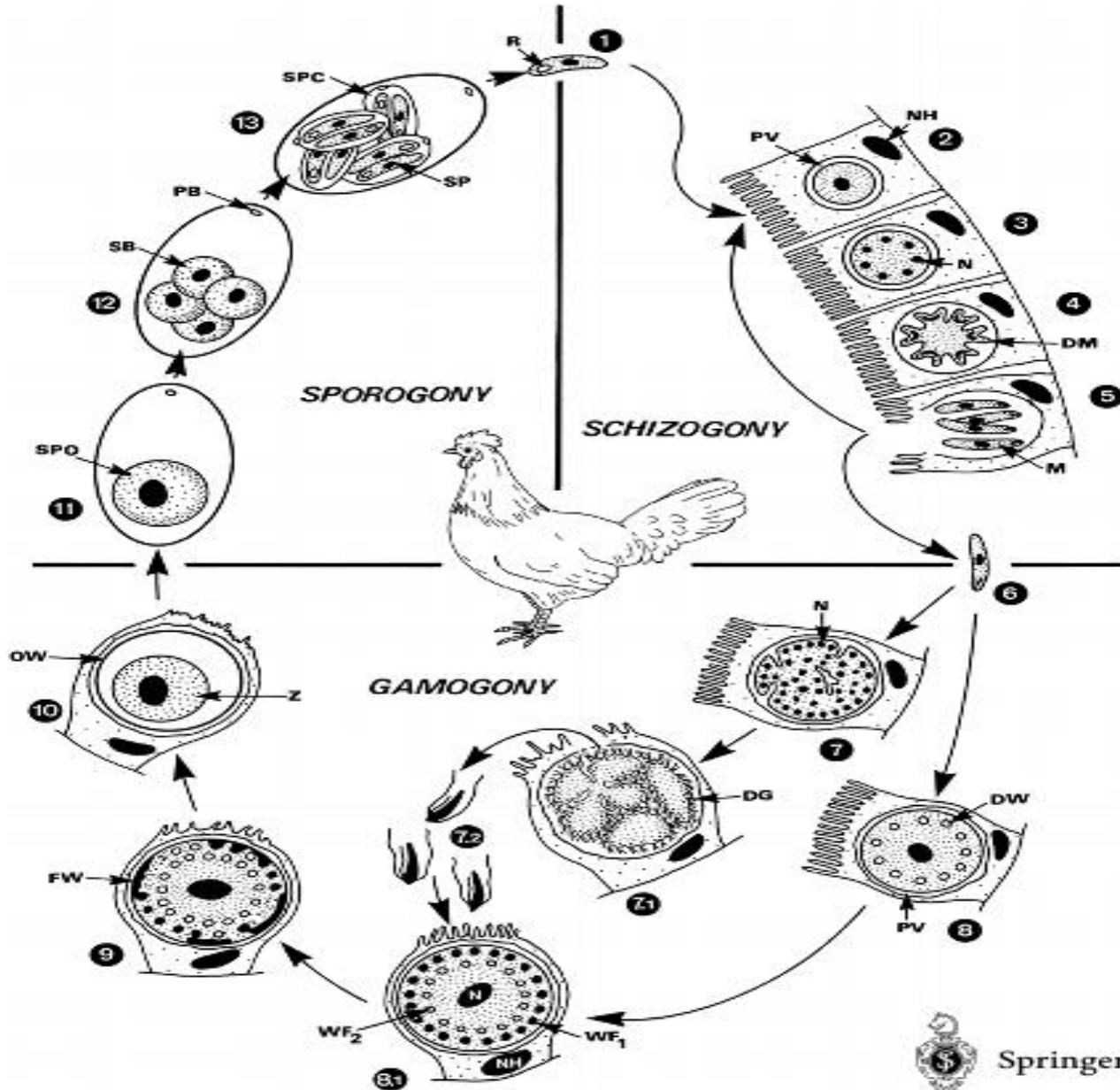
Maldigestion



Inflammation / irritation



Coccidiosis



- Not in DOC, but potentially very early

E. acervulina



Very high reproductive potential

Duodenum

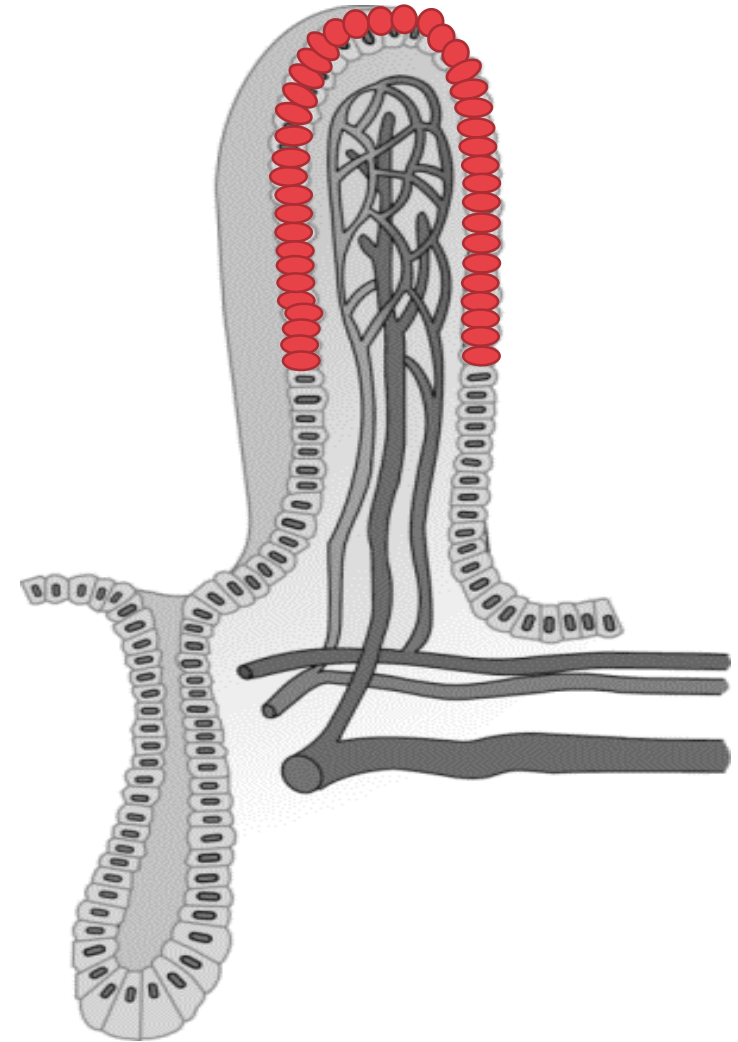
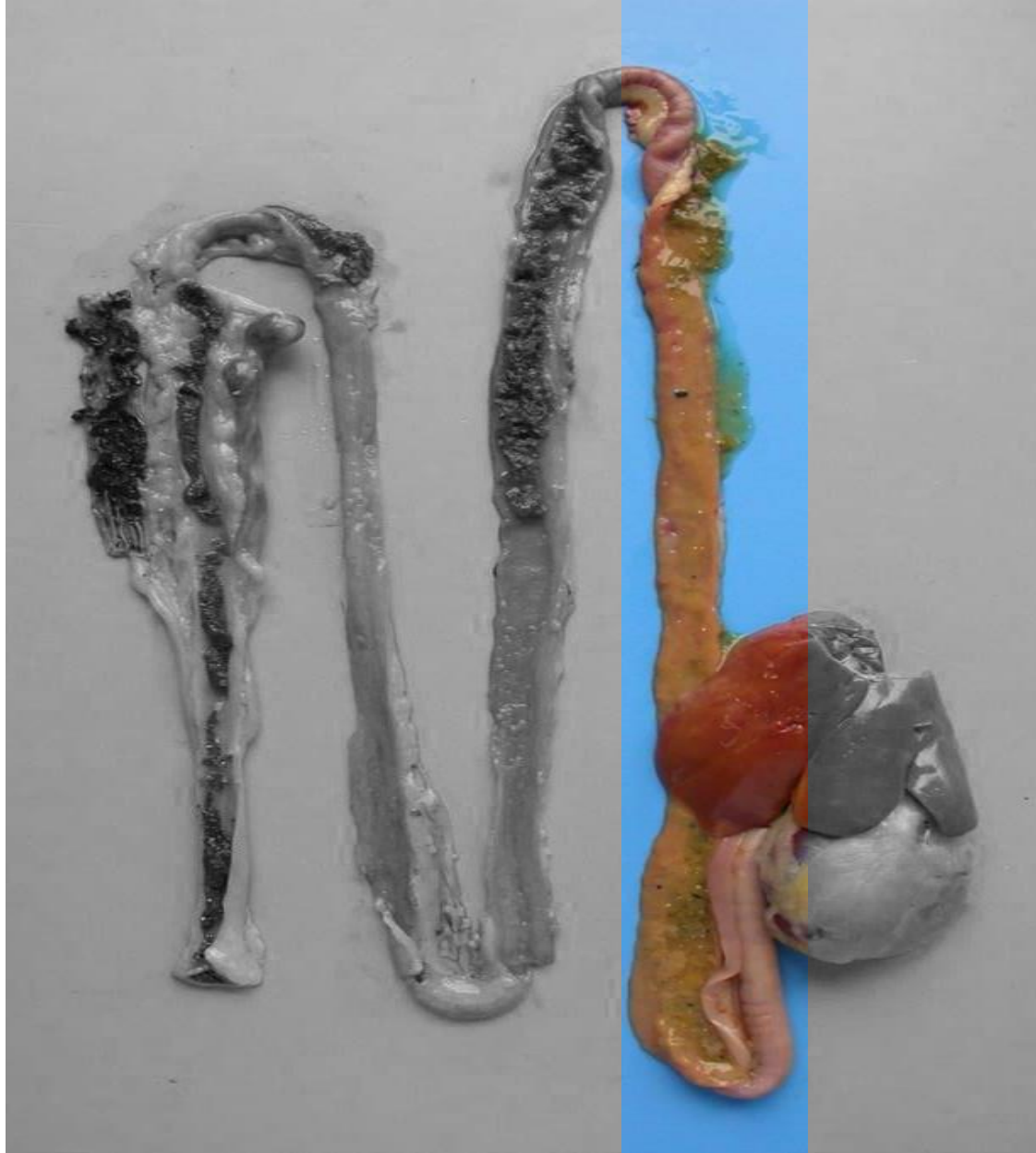
Epithelium, top of villus

Relatively mild

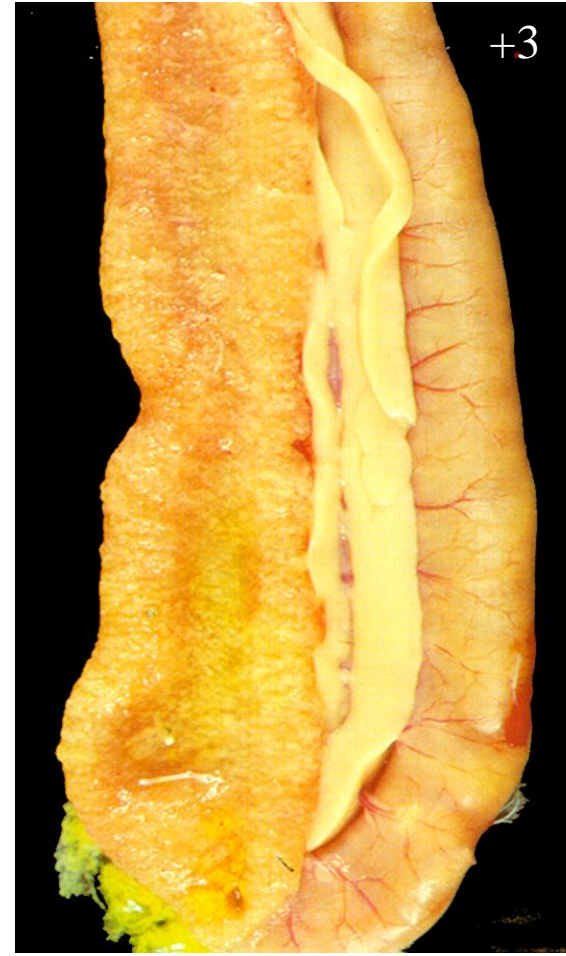
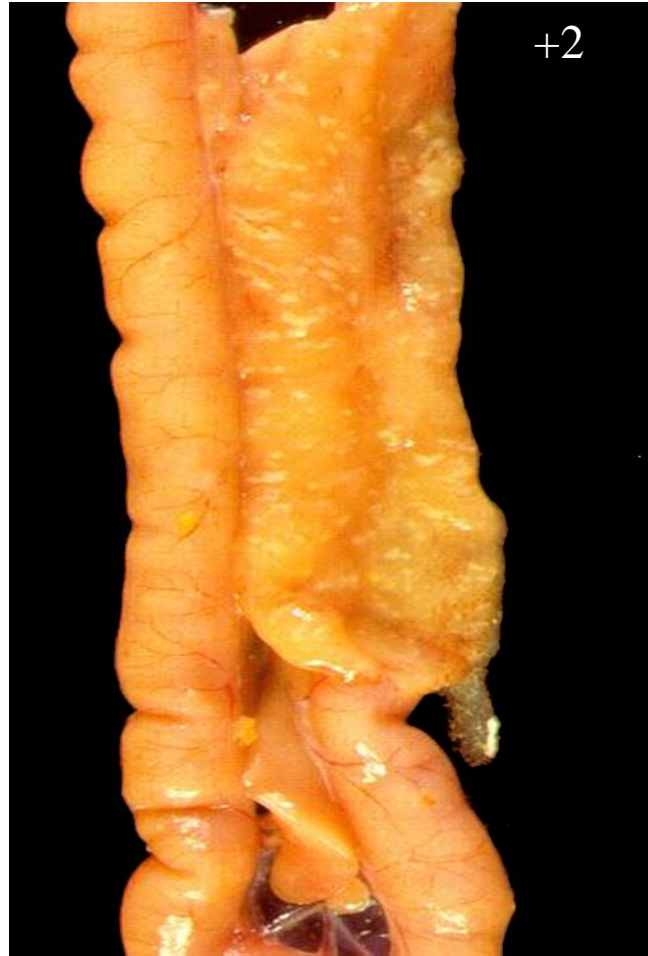
- Maldigestion
- Malabsorption

White streaks – coalescent white plaque

E. acervulina



E. acervulina lesions



E. maxima



Low reproductive potential

Jejunum

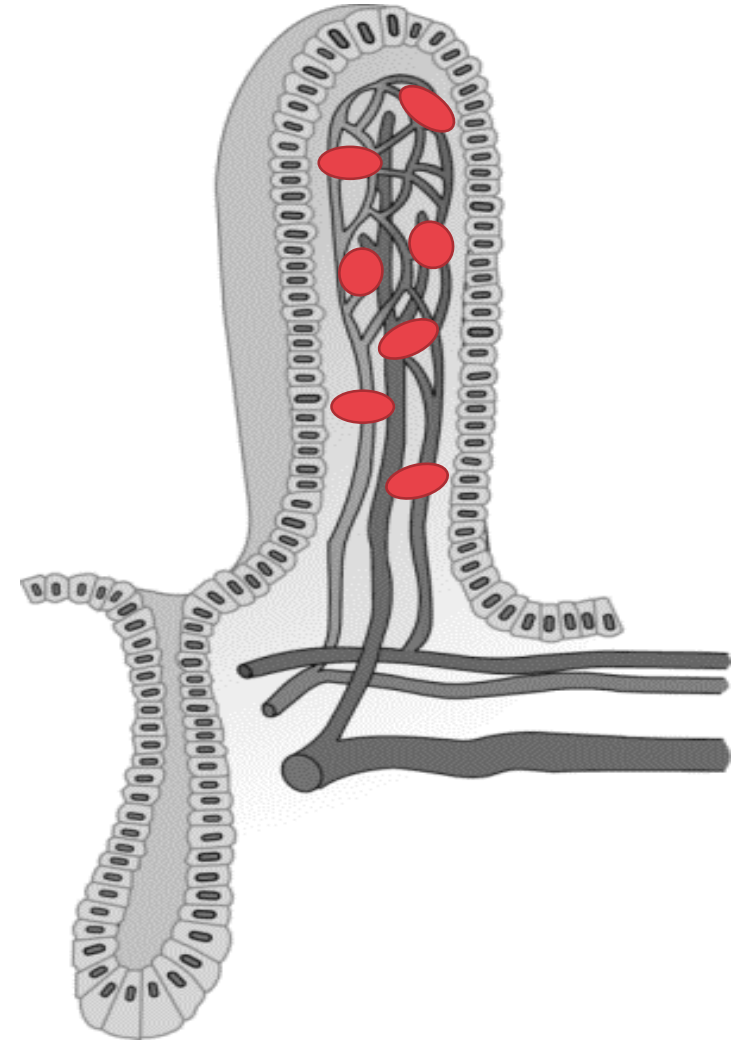
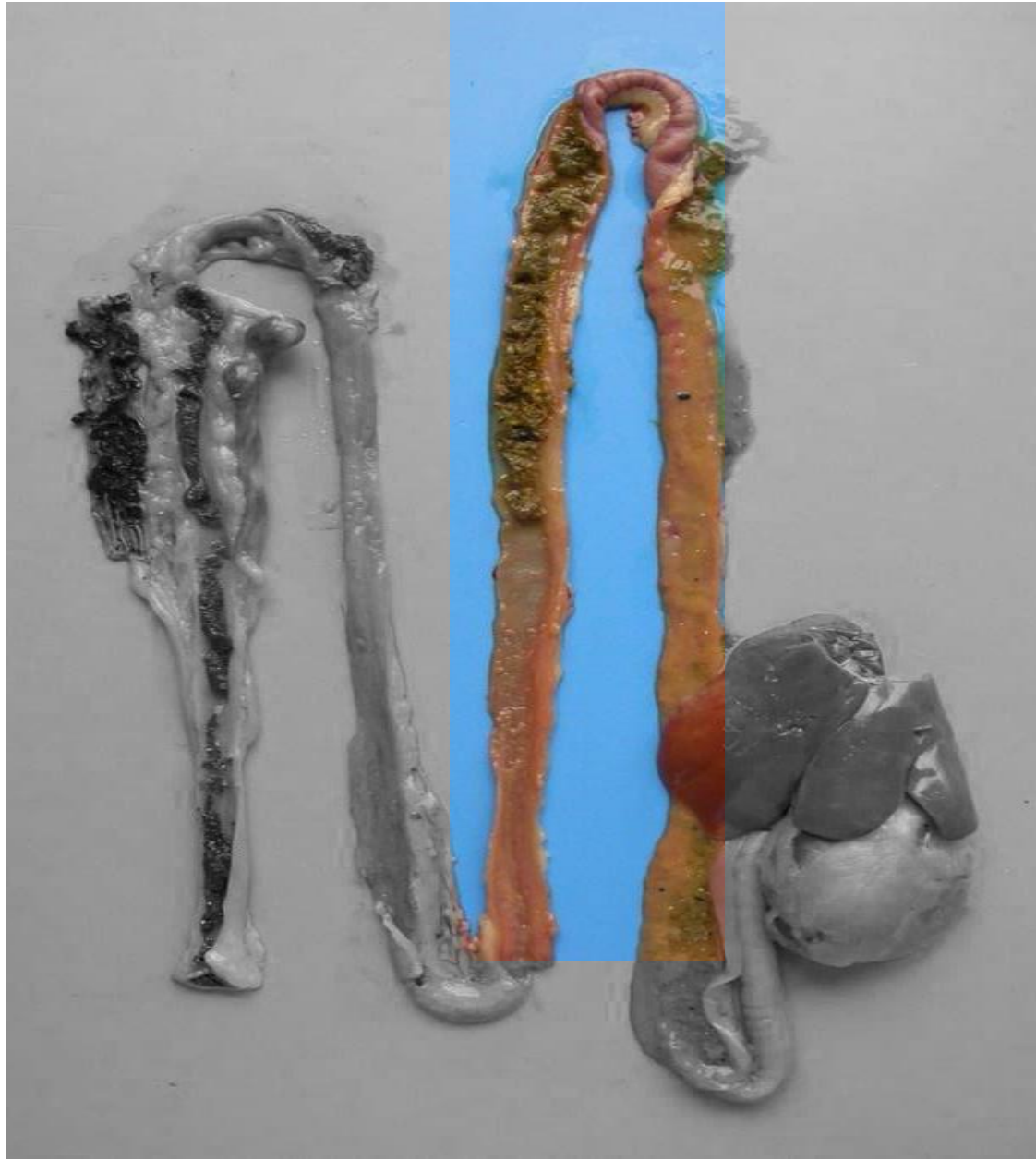
Sub-epithelium, disruption of mucosa

Mild - Severe

- Maldigestion
- Malabsorbtion
- Haemorage

Petechiae – bloody contents

E. maxima



E. maxima lesions



Medium reproductive potential

Caeca

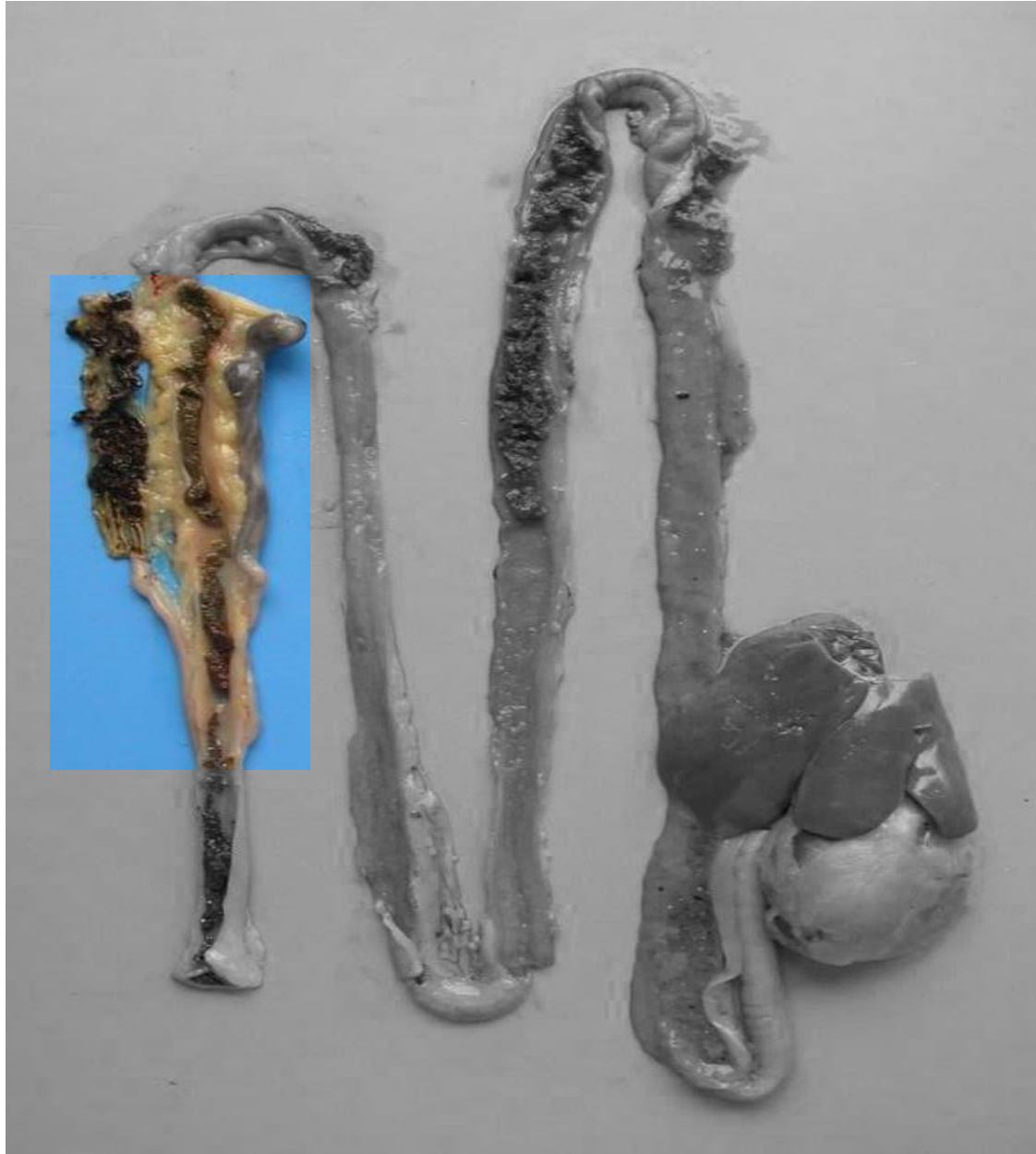
Sub-epithelium, destruction of mucosa & muscularis

Severe

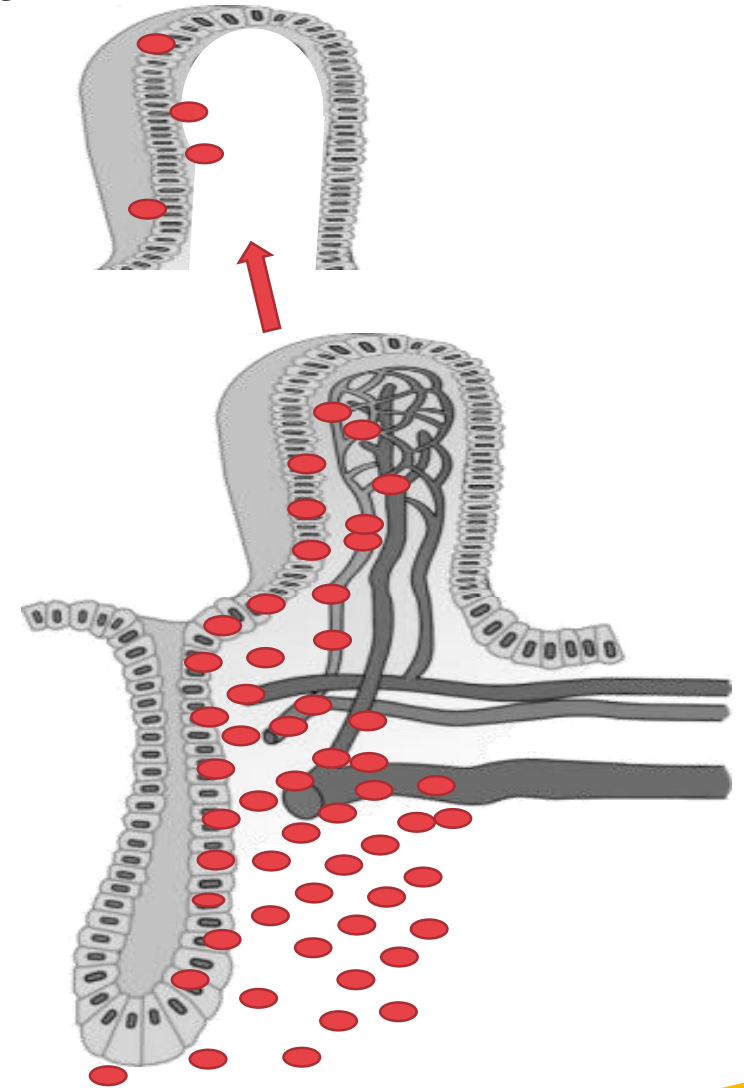
- Maldigestion
- Malabsorbtion
- Haemorrhage
- Death

Petechiae – blood filled caecum

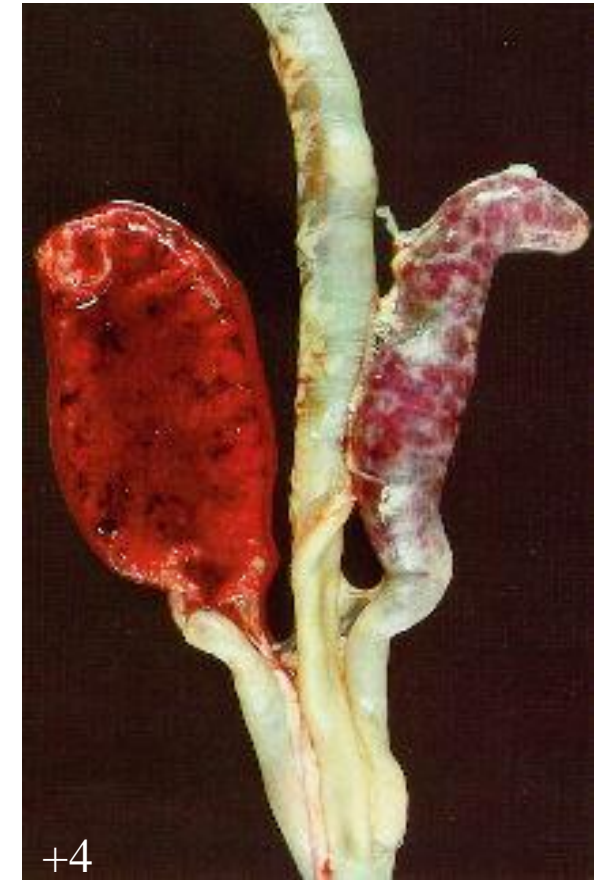
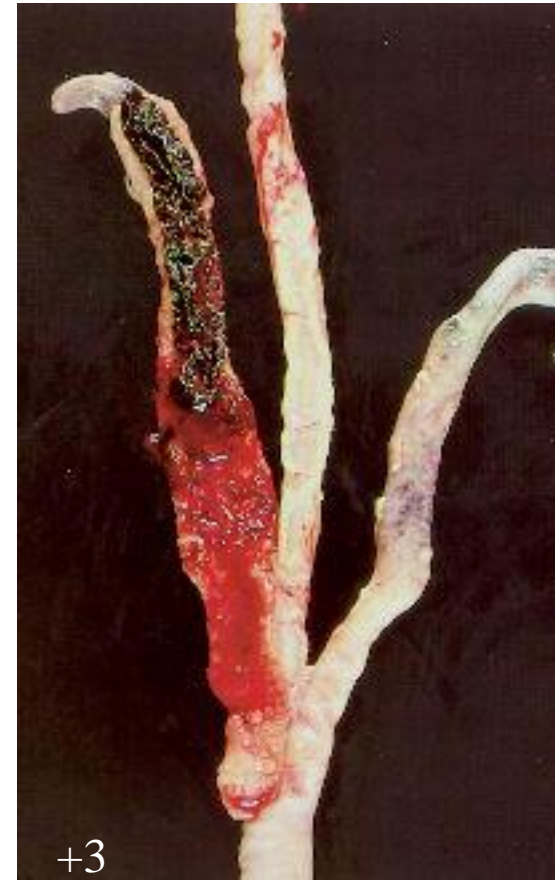
E. tenella



Caseous cecal core
in 'chronic' stage



E. tenella lesions



Infectious Coryza



- Respiratory bacterial disease
 - Trachea, sinuses and air passages of the head
- Affect all ages
 - More severe in adult birds
- Acute or chronic disease
- Reported since 1931

Avibacterium paragallinarum



Infectious Coryza



- Acute respiratory disease
- Swollen sinuses, facial edema & conjunctivitis
- Males : swollen wattles
- Rales
- Decreased feed and water consumption
 - Egg production drop often about 10-40%
 - Culls ↑ and growth ↓ in growing birds
- **Complicated with other diseases: more severe**
 - M.g., M.s., ILT, IBV, fowlpox, Pasteurella multocida



1+1=3

Infectious Coryza



Infectious coryza - Hosts



- Natural hosts & reported outbreaks

- Commercial chickens
- Village chickens
- Guinea fowl (incl wild)
- Pheasants (incl wild)



- Experimental infection refractory

- Turkey
- Free flying birds: sparrow, pigeon en crow



Infectious coryza - Incubation period



- Experimentally: 24-48 hours
- By contact: 24-72 hours
- Within 2-3 weeks disease runs its course
- **Lifelong infection**
 - **Carriers**

Infectious coryza - Survival

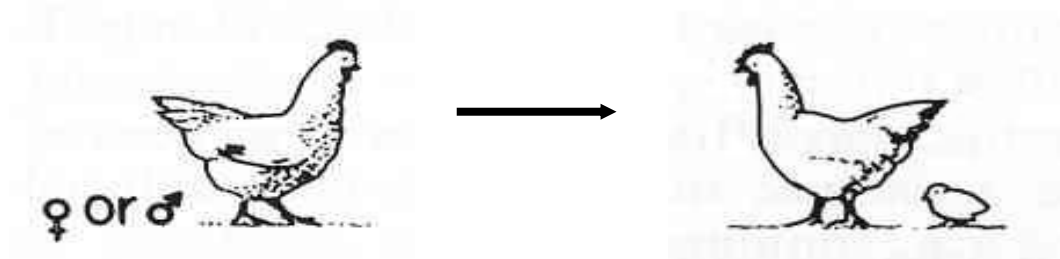


- Outside the host
 - Inactivated rapidly outside the host
 - Tap water : within 4 hours
 - Suspended in saline at 22 °C: at least 24 hours
 - Exsudate or infectious remains
 - 37 °C : 24-48 hours
 - 4 °C : for days
 - Inside the host
 - Latent carriers after recovery

Horizontal transmission

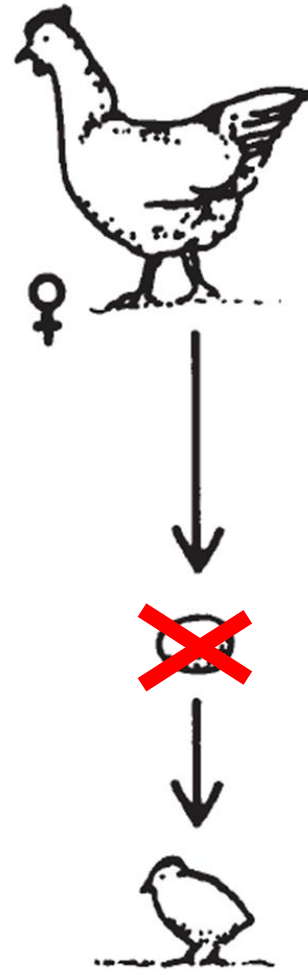


- Direct contact



- Indirect contact
 - Aerosol transmission (between flocks & between farms)
 - Contacts
 - Mechanical vectors (wilde birds)
 - **Introduction of latent carriers**

No vertical transmission



Postmortem



- Inflammation of the nasal passages and sinuses
- Conjunctivitis
- Subcutaneous oedema of face and wattles
- Airsacculitis & pneumonia are rarely present



Infectious coryza - Control



- Reduction spread infected farms
 - Hygiene
 - (Keep infected flocks inside during acute fase)
- Vaccination
- Treatment?
 - Alleviating the severity
 - Failure due to decreased water and feed intake
 - Failures due to antibiotic resistance
 - Doxycycline, Oxytetracycline & Trimethoprim/sulfonamiden
 - Multiresistant strains reported in South America's
 - **After treatment: still carriers**

Thank you for your attention!

Time for a short break

