

# Sheep abortion – the local picture

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# Dalehead Vet Group examinations of aborted lambs 2007

- 62% Enzootic abortion
- 13% Toxoplasmosis
- 7% Listeria
- 7% Salmonella
- 0% Campylobacter
- 18% No diagnosis



# Dalehead Vet Group Flockcheck results 2006

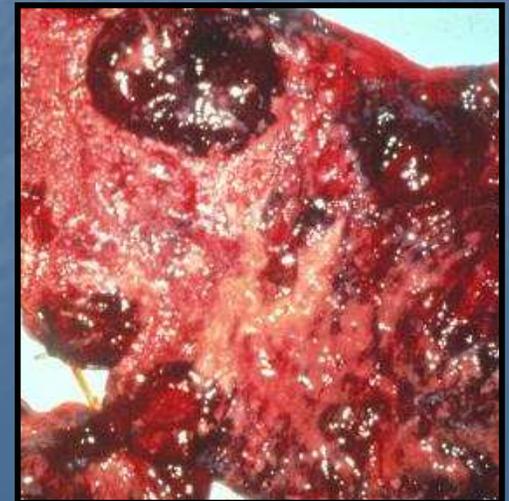
40% of ewes tested showed evidence of  
Enzootic Abortion

36% of ewes tested showed evidence of  
Toxoplasma

75% of farms showed evidence of either  
Enzootic or Toxoplasma infection

# Enzootic Abortion - Clinical Signs

- Abortion in last 3 weeks of pregnancy or premature live lambs
- May be discharge for 24 hours before abortion, ewes not ill
- Aborted lambs appear fresh
- Cleansing thickened “cheesy plaques”



# Spread of Enzootic Abortion

- Caused by bacteria *Chlamydia Psittaci*
- Aborted lambs, afterbirths and vaginal discharges infectious to other ewes (**sheep to sheep spread**)
- Infection can survive on ground for several days
- Aborted ewe immune in future years but may be carrier and shed organism around lambing
- **99% of spread of infection is around the time of abortion/lambing**



# Spread of Enzootic Abortion

- Infection picked up by mouth
- Bacteria lie dormant in wall of uterus until next pregnancy
- Infected ewe or lamb will not become immune until after it aborts
- Bacteria released into uterine fluids by day 90 of pregnancy and damage placenta
- Causes late abortion but not barren ewes or mummification

# Prevention and Control

- Hygiene
- Antibiotic treatment of pregnant ewes
- Vaccination
- Sourcing of replacements

# Hygiene

99% of spread of Enzootic abortion takes place around time of lambing

- Dispose of infectious material – lambs/afterbirths/bedding
- Isolate aborted ewes from all other sheep until discharges stop (3 weeks)
- Risk of humans spreading infection
- 'Mothered-on' lambs at risk

# Antibiotic treatment

- Good success with long acting antibiotic injections
- Day 90 -105 if infection previously confirmed
- In face of an outbreak
- Does not provide an immunity

# Vaccination

- Important part of any control programme
- Gives solid immunity to previously uninfected animals
- Greatly reduces the number of abortions in infected ewes which haven't yet aborted
- Reduces shedding in animals which have previously aborted
- ENZOVAX, single shot 1 month pre-tupping

# Sourcing of replacements

- Breed own replacements
- Enzootic Abortion free flocks
- Buy from known (vaccinated) flocks
- Vaccinate all replacements as part of control programme
- Tups do not spread Enzootic Abortion

# Summary – Enzootic abortion

- Most common cause of infectious abortion in UK sheep flocks
- Sheep to sheep spread
- Carry-over from one year to next
- Control by vaccination (and antibiotic)
- Human health risk to pregnant women

# Toxoplasmosis

- Protozoal organism – not a bacteria
- 2<sup>nd</sup> most common cause of abortion in ewes, also causes barren ewes and mummified lambs and weakly live lambs
- After infection ewes get a lifelong immunity
- Only causes problems if sheep infected for the first time when pregnant
- **No sheep to sheep spread**



- Toxoplasmosis spread by cats

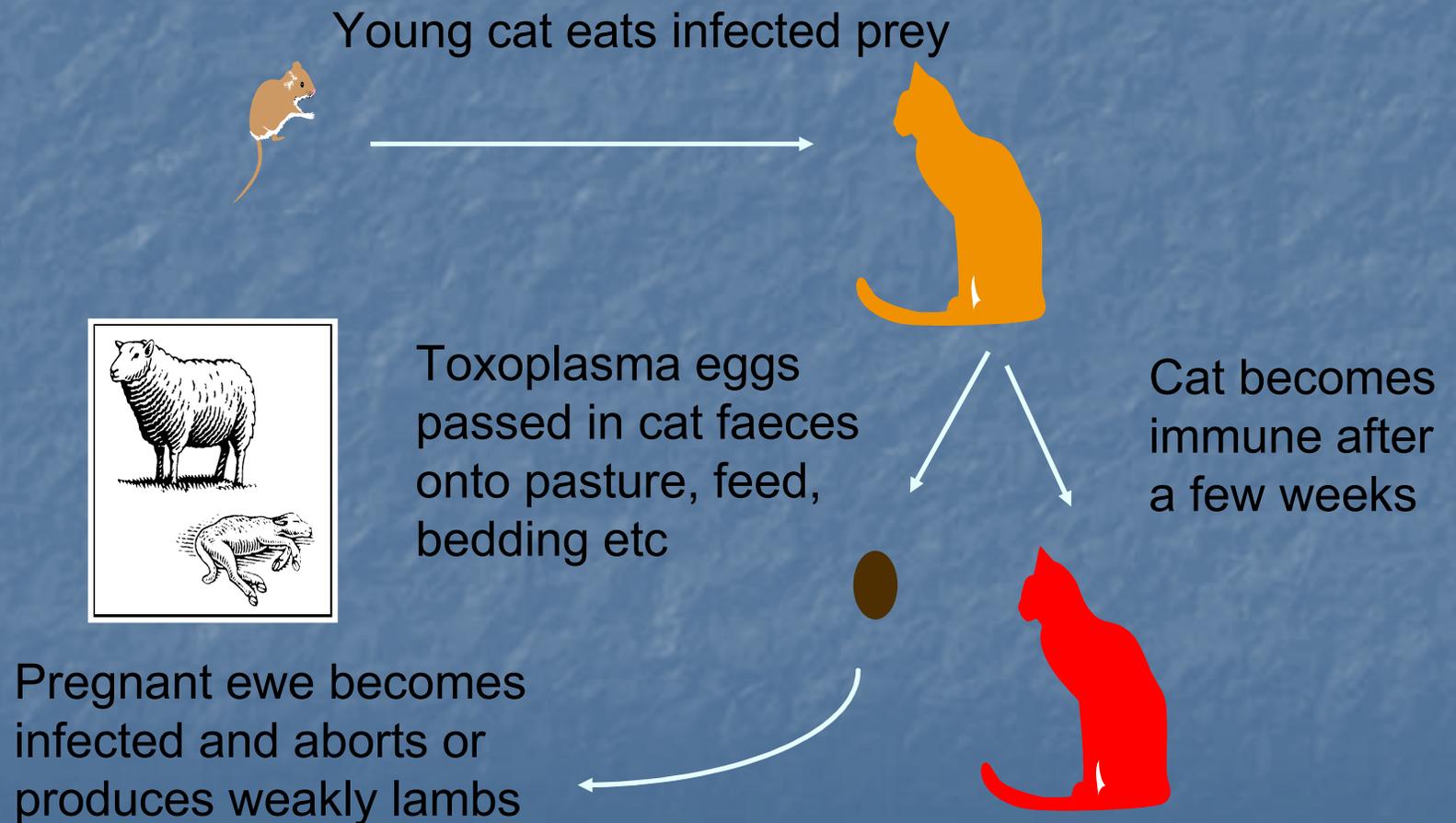


# Spread of Toxoplasma infection

- Cats infected by eating carrier mice
- Cats pass oocysts (eggs) in faeces for up to 2 weeks & then become immune
- Only cats can produce oocysts to infect sheep
- Oocysts can survive in environment up to 12 months
- **Sheep infected by eating feed or drinking water contaminated with cat faeces**
- 50 gms cat faeces can contain 100,000,000 oocysts
- 40 oocysts sufficient to infect a sheep

# Toxoplasmosis

## How Sheep Become Infected



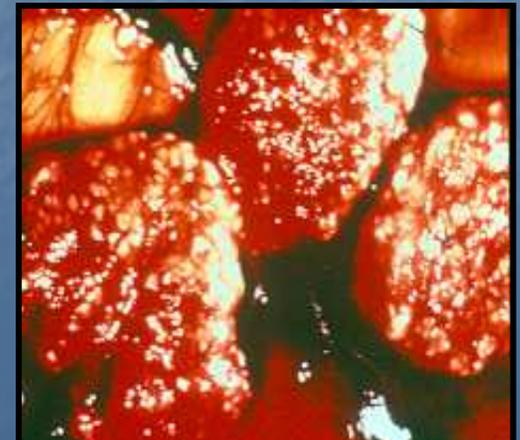


# Spread of Toxoplasma infection

- Contaminated bedding muck spread on land
- Contaminated feed (hay)
- In lamb ewes wintered away from home
- Does not persist in ewes from year to year

# Clinical signs

- If not pregnant – no symptoms
- In early pregnancy – reabsorption, barren ewes & poor conception rates in hogs
- In later pregnancy (day 70) – mummification, abortion, weakly live lambs
- Cleansing not thickened, white spots on buttons





# Prevention and control

- Antibiotic therapy of no use
- Neutering farm cats
- Feed store security
- Vaccination ~ TOXOVAX, single shot at least 3 weeks before tugging, long term protection
- Deccox (anticoccidial) –ideally needs to be fed throughout pregnancy – no long term immunity

# Toxoplasmosis - summary

- No sheep to sheep spread
- No 'carry-over' from year to year in sheep
- Infection maintained in wildlife (mice), spread by cats
- As well as abortions causes barren ewes, mummified and weakly lambs
- Control by vaccination
- Human health risk

