

27th February 2007

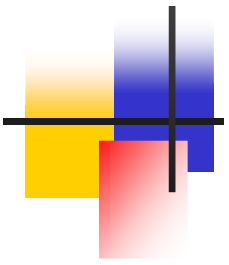
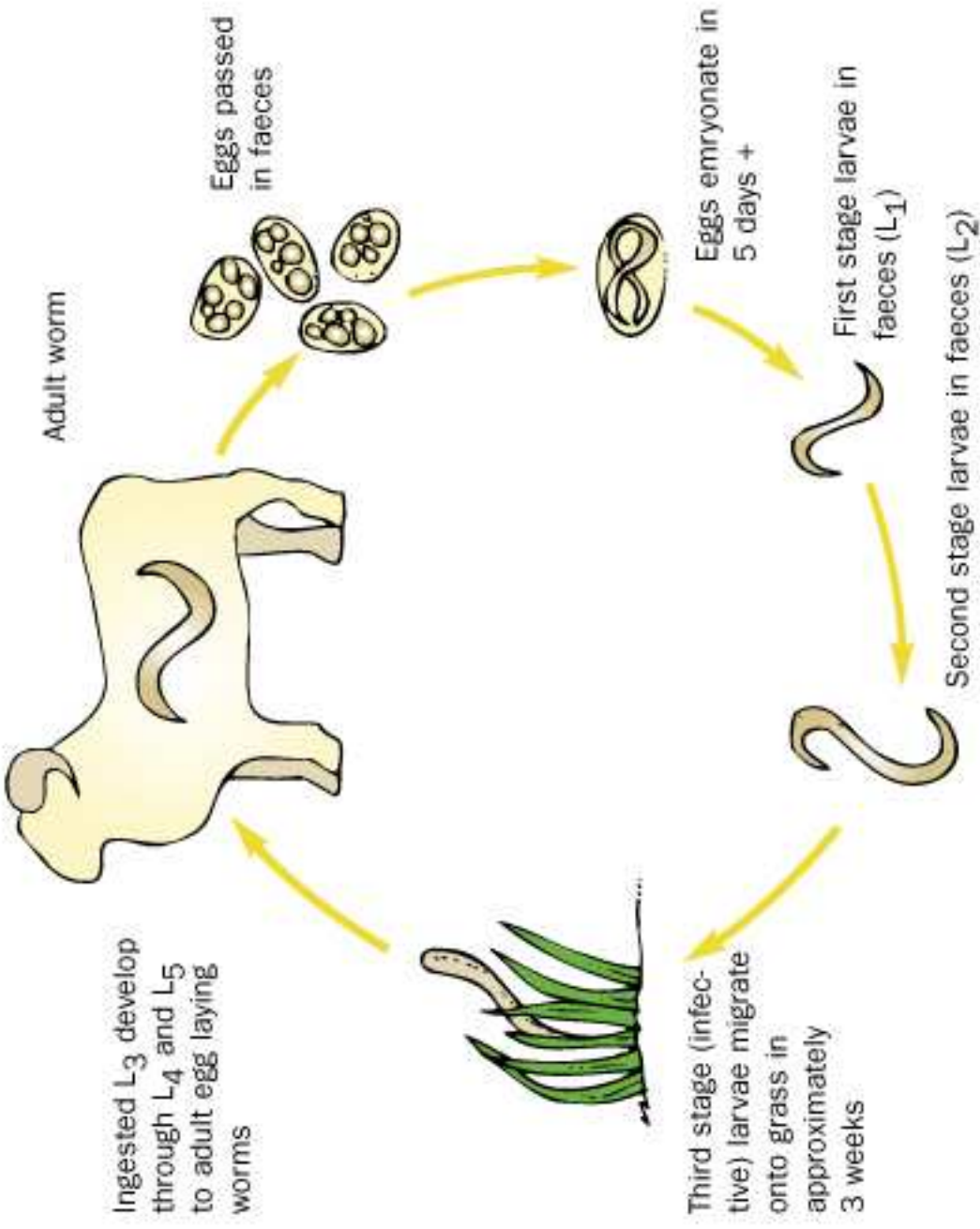
Dalehead Veterinary Group

Annual Sheep Meeting

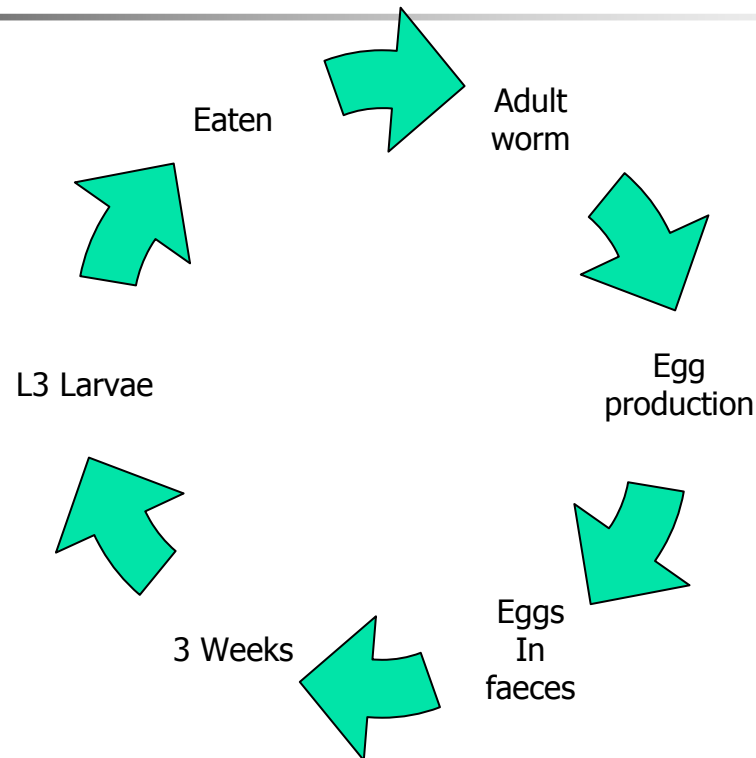


Scours and ill thrift in growing lambs – worms !

- Nematodirus
- Ostertagia
- Tapeworms
- Anthelmintic resistance
- Responsible use of wormers
- Trace element deficiencies



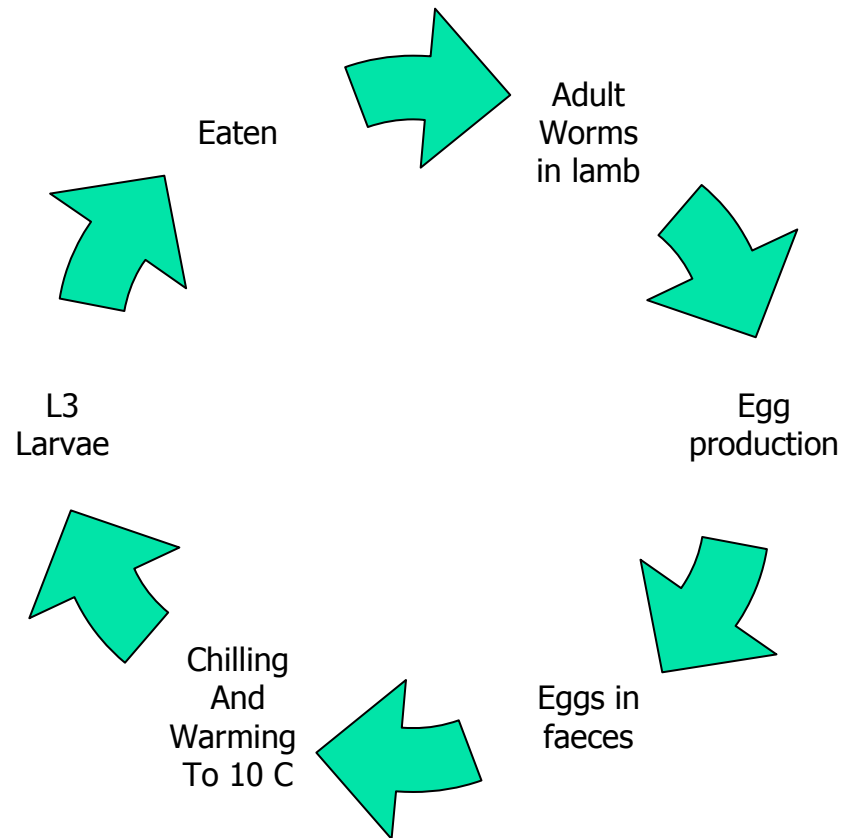
Roundworm life cycle



- Most eggs/larvae on pasture will survive overwinter but die off by end of July in the following year
- Sheep usually carry different worms to cattle



Nematodirus





Nematodirus

- If lambs have grazed land the previous spring – massive number of larvae hatching at time when this year's lambs start to eat grass (May/June) & have no immunity
- Adult worms lay eggs after 3 weeks – low worm egg count (less than 150 eggs/gram). Can have major problem but low egg count
- All wormers effective (non persistent) – strategic dosing May/June
- No known resistance of Nematodirus to wormers
- Older lambs and adult sheep immune



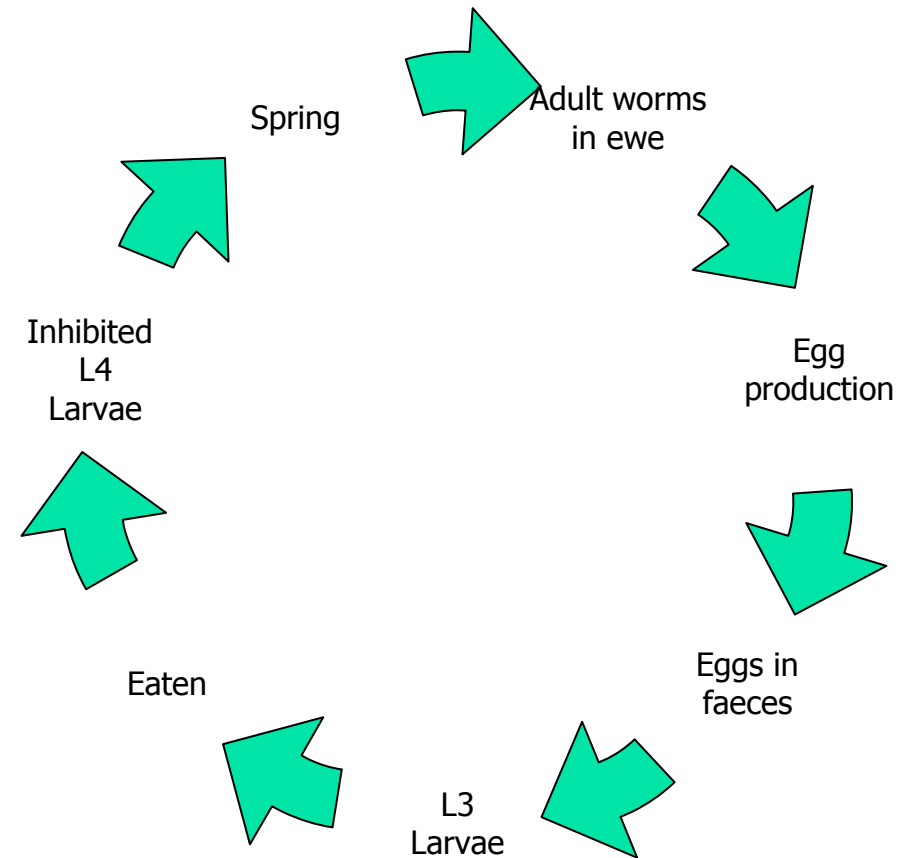
Ostertagiasis

2 Sources of infection for lambs

- Over-wintered larvae on pasture – die off by July of following year
- Larvae picked up by ewes in autumn become inhibited in stomach wall. Activated in spring – periparturient egg rise – pasture contamination. Type 2 Ostertagiasis

Ostertagia Life Cycle

- Nematodirus – arrested development at egg stage on ground
- Ostertagia – arrested development at larval stage in ewe





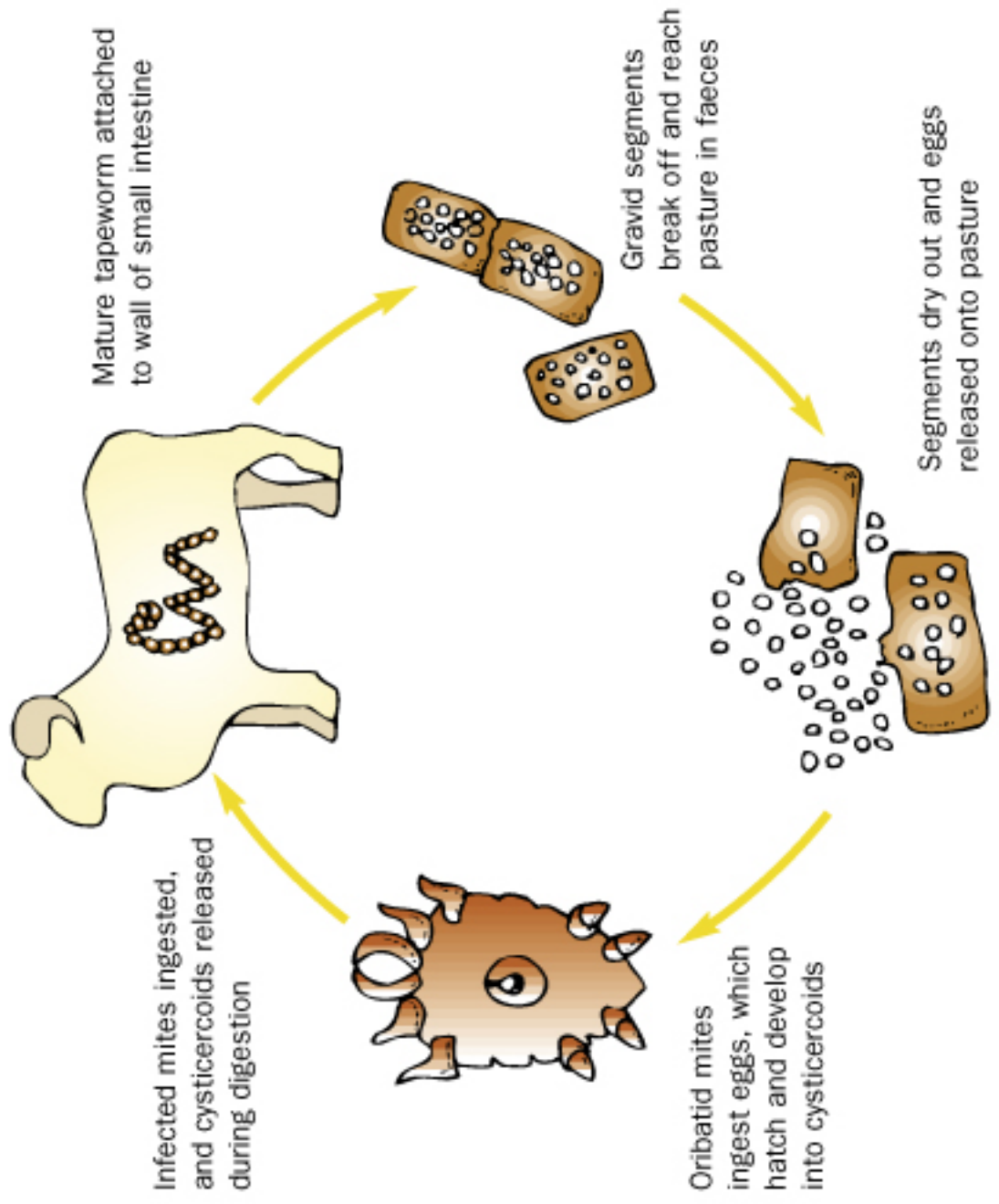
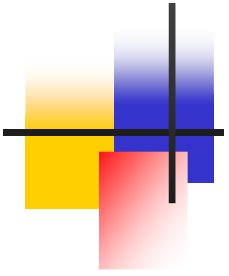
Ostertagia

- Clinical disease (scour)
- Subclinical production losses due to gut damage, protein loss and reduced appetite
- All classes of wormer effective
- Only Cydectin has persistent effect
- Anthelmintic resistance a problem



Tapeworms

- Eggs passed by adult tapeworms eaten by beetle mites
- Mites become active in spring
- Mites eaten by lambs, life cycle 6 wks
- Infection commonest May to July
- Only white drenches and Levitape effective
- Limited importance





Anthelmintic resistance –2005

- White drench only – 46% of farms
- White drench and levamisole – 31%
- Levamisole only – 5%
- Ivermectin – less than 5%
- 77% farms resistance to white drenches

- 82% of farms had some evidence of resistance !!!



Testing for wormer resistance

- Take dung samples from 10 lambs pre worming for worm egg counts
- Re-sample 5 – 16 days later
- Resistance suspected if reduction in worm egg counts less than 90%
- No resistance of Nematodirus so perform checks mid summer



Good worming policy

- Treat all incoming stock with Ivermectin and Levamisole wormer and yard for **24 hours** or put onto **dirty** pasture
- Do not underdose
- Reduce frequency of drenching – clean grazing
- Rotate classes of wormer annually – may use specifics for tapeworms, scab (& Nematodirus)



Scours and ill thrift in growing lambs – summary

- Coccidiosis
- Nematodirus
- Ostertagia
- Tapeworms
- Anthelmintic resistance
- Responsible use of wormers
- Trace element deficiencies



Trace element deficiencies

- Cobalt
- Copper
- Selenium

A significant cause of ill thrift in growing lambs



Cobalt deficiency (pine)

- Dietary cobalt required by rumen bacteria to make vitamin B 12.
- Common cause of ill thrift in weaned lambs
- open “dry” fleece
- Pot bellied
- Runny eyes
- Anaemic
- Lowered immunity



Cobalt deficiency

- **Diagnosis** - Blood or liver vitamin B12 levels
Dose response trials

- **Supplementation** – Drenching (1 week)
 - _ Injections (1 month)
 - _ Bullets



Copper deficiency

- “Tied up” by iron, sulphur and molybdenum
- Breed susceptibility to deficiency
- Deficiency in pregnant ewes – swayback
- Deficiency in growing lambs - poor growth, scouring, lowered immunity and ill thrift



Copper deficiency

- Diagnosis

 - Blood copper

 - Liver copper

- Treatment

 - Drenches

 - Injections

 - Copper needles/boluses



Selenium

- Closely linked to vitamin E
- Deficiency causes white muscle disease, lowering of immunity and ill thrift
- Diagnosis, blood testing GSH-PX
- Treatment – drenching, injection or boluses



Conclusion

- Trace element deficiencies widespread in growing lambs causing reduced performance and increased susceptibility to infection
- Diagnosis by blood sampling, liver samples or response to treatment
- “SC” in wormers is worthwhile though effects not long lasting
- For advice on drawing up worming or trace element programme seek veterinary advice – but only ask Neil Roberts if you have a few hours to spare!