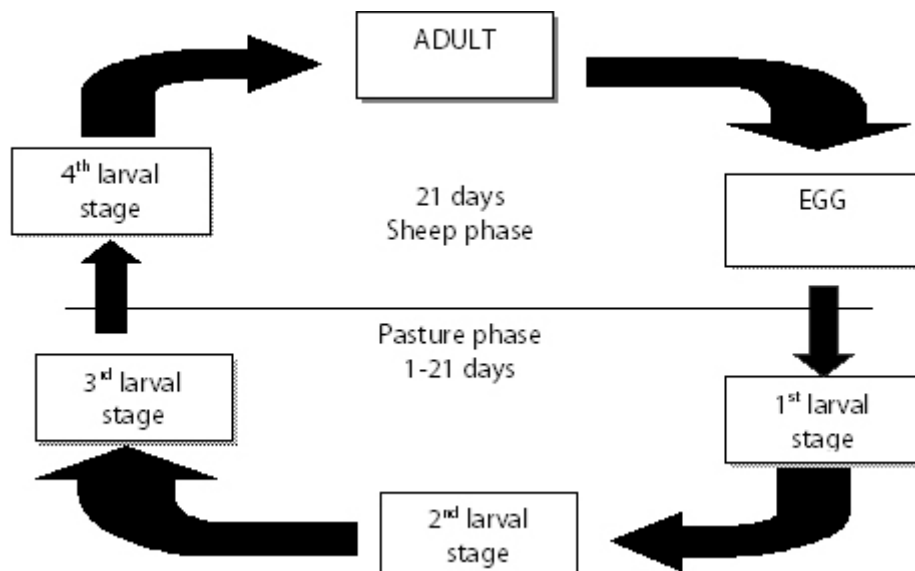


## Round Worms in Sheep

- Most common group of worms that cause the most damage with sheep production are round worms or otherwise known as Strongyles

### Round Worm (strongyle) life Cycle

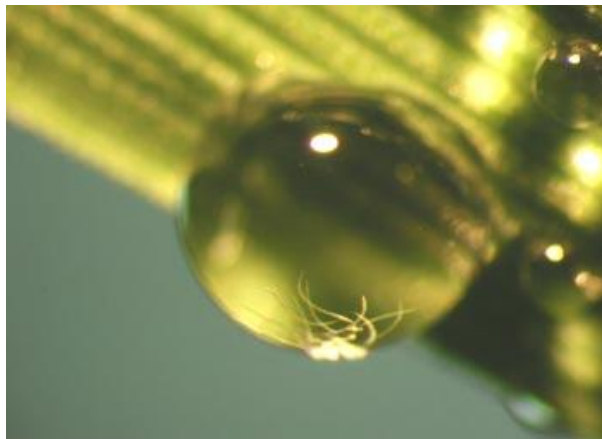


*Life cycle of round worms. (Source: Cole 1980)*

- The life cycle of the round worms can be broken down into a dung/pasture stage and an animal stage
- When eaten by the animal the round worm will go through its final larval stage (4<sup>th</sup>) into adult stage. It takes approx. 18 to 21 days for the worm eggs to appear in the worm faeces.
- In the dung/pasture stage the development of the larvae in the first 3 stages will be dependent on temperature and the amount of moisture, and of course pasture!

*(strongyle life cycle cont.)*

- The amount of moisture and temperature conditions will determine the time in development of the strongyle larvae (can be from 1/2 days up to 20/23 days)



*L3 larvae in water drop on pasture waiting to be digested. Photos, courtesy of Dr Russ Hobbs, Murdoch University*

- So, a **complete** lifecycle of a strongyle worm can vary from 23 days to 44 days (more variation in pasture stage than animal stage)
- As a rule, more moisture with heat, the quicker the eggs will hatch to the 1<sup>st</sup> larval stage
- Some species of round worms found to dormant in sheep for up to 6 months until conditions are right to breed
  - In wet summers dominant worms are barbers' pole and black scour worm
  - In wet winters dominant worms are the brown summer worm and black scour worm
  - Poorer conditioned sheep and weaners (low immunity) more susceptible to been infested by round worms.

<b>Strongyle</b>			
Name	Worm Destination	Animal Ingestion to Egg Stage (days)	Notes
<b>Barbers Pole</b>	Abomasum	14 - 21	In wet/warm conditions quick build-up of eggs. Large population causes major production issues. Blood sucker. Sub clinical signs in sheep are anaemia and bottle jaw.
<b>Small Brown Stomach Worm</b>	Abomasum	21 - 28	Consumed in dry periods and stay dormant in animal. Become active with favourable conditions (wet winter). Sub clinical signs of infection are scouring and condition loss.
<b>Stomach Hair Worm</b>	Abomasum	21	Similar to small brown stomach worm in development, but relative harmless
<b>Black Scour Worm</b>	Small Intestine	21	Weaners most vulnerable and if left unchecked will cause major production issues (sub clinical and clinical )More of an issue at lower egg count compared to other round worms.
<b>Thin-necked Intestinal Worm</b>	Small Intestine	15	Young sheep more susceptible. Resistant to dry, cold conditions. Identified separately to rest of Strongyles in worm tests due to distinct larger size as an egg.
<b>Hookworm</b>	Small Intestine	55	Larvae can infect animal by been eaten on pasture or by penetrating the skin. Feed on blood through gut tissue. Doesn't cause major production problems. Subclinical sign is some scouring.
<b>Intestinal Threadworm</b>	Small Intestine	14	Lambs can be infected through their mum's milk. Infection is often associated with high stocking rates and moist conditions.
<b>Nodule Worm</b>	Large Intestine	35	Causes permanent damage to gut wall and therefore affects the gut walls performance, occurring in summer rainfall area. Signs of infection are permanent scouring, weight loss. Young sheep will looked humped back from stomach pains and ill-thrift
<b>Large Bowel Worm</b>	Large Intestine	35	Associated with Nodule worm, breeding in wet winters. More problems mainly seen in weaners with humped back from stomach pains and ill-thrift
<b>Large Mouth Bowel Worm</b>	Large Intestine	70	Weaners more susceptible with it eating large "plugs" of the gut lining.
<b>Whip Worm</b>	Caecum	30	Very tolerant of dry conditions, so problems more arise in droughts. Stage 3 Larvae develop in egg and drop onto soil when faeces fall apart. Sheep pick up when eating closes to the soil.
<b>Lung Worm</b>	Bronchi (airway)	42	Causes breathing difficulties and coughing if in large numbers. Can be related to pneumonia.