



# DIY Fecal Egg Counts.

## You will need:

- Small sandwich bags or something to put samples in.
- Newspaper.
- Two small jam jars.
- Digital scales.
- Tea strainer, double layer of cheesecloth or paper milk filter for filtering solution.
- Stirring device (lollipop sticks, plastic spoon, fork etc.).
- Pipettes or small syringe.
- Flotation fluid: 56ml for each sample (mix 400g table salt in 1L water, then stir in 500 g sugar , keep stirring until all the salt and sugar are dissolved).
- McMaster egg count slide (available through eBay for around £20 to £25).
- Microscope.
- Pen and paper.

## Method

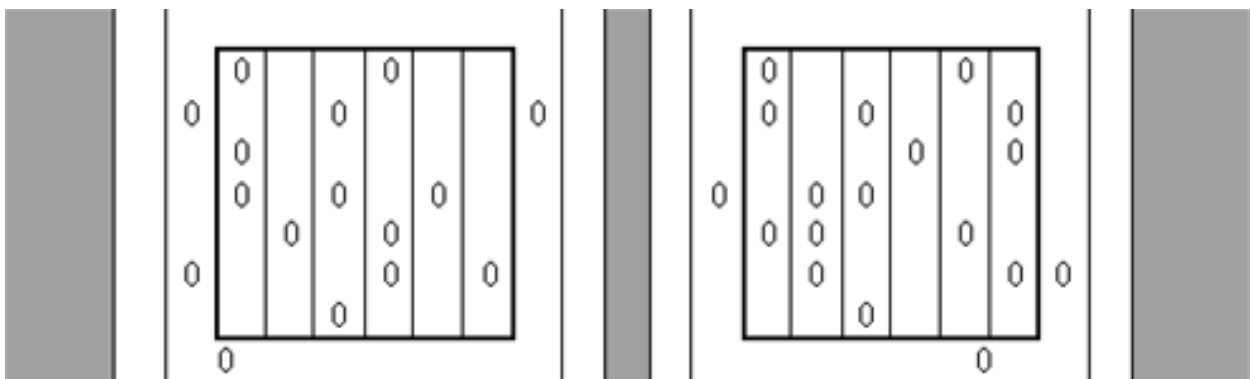
1. Collect a tablespoon of fresh droppings from each goat that you want to check. (If taking more than one sample make sure you label them. Put samples into small sandwich bags. Samples can be stored in the fridge for up to 24 hrs., but no longer or the eggs hatch and your count will not be accurate.
2. Cover your work surface with newspaper in case of accidental spills or splashes of the samples.
3. Weigh 4g of the sample into a small jam jar, add 56ml floatation solution. You can leave the container on the scales and add flotation solution until it weighs 60g. Mash up the sample thoroughly using the lollipop stick or plastic spoon. Put the lid on the jam jar and give it a good shake to mix it up well.
4. Filter the resulting liquid into a second jar to remove bits of grass etc.
5. Using a pipette or small syringe stir the sample and draw off a small amount, fill one compartment of the slide. Do this slowly to help avoid getting air bubbles in the slide. Repeat for the second compartment.
6. Allow the slide to rest for 5 minutes to allow the eggs to float to the top of the slide compartments and other matter to settle to the bottom. Then examine the slide through the microscope.
7. Spend time looking at the slide to make sure you can identify the eggs, do not confuse them with air bubbles which are round and have a very dark border. Move the slide around so you get the hang of the view moving in the opposite direction to the slide. Several of the links below have images of common eggs that can be found.



8.

Count the eggs within each square, one column at a time. The easiest way is to have a pen and paper handy and make a mark for every egg I see. You could use a click counter, or just count, but if you get disturbed you'll have to start over again.

To calculate the number of eggs per gram you need to add the number of eggs counted in each square together, then multiply by fifty.



For example, in the image above there are 12 in the left box, 15 in the right box:

$$12 + 15 = 27$$

$$27 \times 50 = 1350 \text{ eggs per gram}$$

## Health and Safety.

Once done dispose of samples and newspaper appropriately and disinfect the work area.

Remember: faeces may contain hazardous pathogens (bacteria, viruses etc.). Appropriate hygiene and safety procedures should be employed. Local health and safety regulations should always be observed.



### Further information:

<http://www.rvc.ac.uk/Review/Parasitology/RuminantEggs/Common.htm>

<http://www.rvc.ac.uk/Review/Parasitology/EggCount/Principle.htm>

<http://fiascofarm.com/goats/fecals.htm> <http://www.scops.org.uk/endoparasites-using-fecs.html>

<http://www.ansci.cornell.edu/goats/Resources/GoatArticles/GoatHealth/GoatParasites/TakingFecalSamples.pdf>

<http://www.uaex.edu/publications/PDF/FSA-9608.pdf>