

Farm carabid monitoring – pilot protocol

You will need:

- Trapping container cup x3 you can use plastic cups or yogurt pots, just try to find 3 of the same
- Trap hat/cover and pegs x 3
- Fluid- propylene glycol (non-toxic antifreeze), or ethanol are ideal, but unscented detergent with water will do. A space saving liner is optional.

Where do I put the traps?

Choose a field that you are interested to find out what carabids are there, contact me if you're not sure which to pick.

Trap 1: Put close to the edge of the field, in the margin or headland if present.

Trap 2: Measure 5 metres (16ft) out from the first trap into the field, and put the next trap there.

Trap 3: The third trap should be in the centre of the crop, if possible, on a line out from the first two traps.

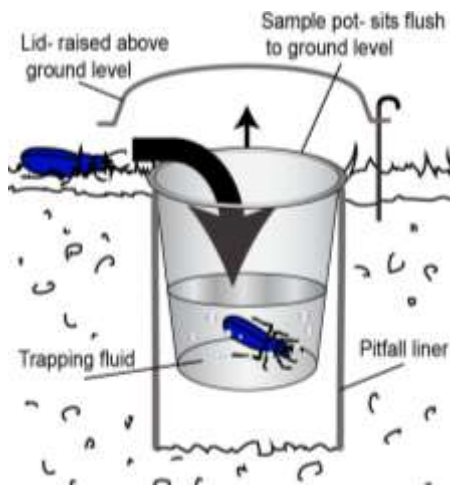


Mark them with a cane to find them again! Make sure traps are not accessible by livestock, and avoid siting near public paths.

How do I set them up?

See 'how to pitfall trap on your farm' on Rothamsted's youtube www.youtube.com/user/RothamstedResearch

- Dig a hole and set the container so that the lip is level with the soil surface- and there are no gaps between the edge of the trap and the soil. To make it easier to reset I have provided a liner- a tube that the cup will sit in.
- Fill with the trapping fluid (you need to kill the beetles or they will eat each other). Ethanol you can mix 70:30 with water. If you only have detergent, add 2 drops to a litre. Fill the container to a depth of 4-5cm (1.5- 2 inch).
- Set the cover raised 2-3cm (1 inch) above the soil surface- to protect from animals and the weather.
- Collect traps after 7 days.



How do I process the samples?

In the pilot I would like to see what level of ID farmers would like to go to, so please try to ID the carabids you have with the guide provided. Pour off excess trap fluid, then empty the trap into petri dishes provided.

1st level: count the carabids, opposed to other beetles and insects.

2nd level: see if you can determine families such as Blackclocks, Seed-eaters, or Pin-palps.

3rd level: see if you can pick out a few, or even all the species. This way you can determine which predatory sorts you have!

Take a photo of each petri dish, and email to me so that I can verify your ID. Try to turn the beetles so I can see their backs, and try to get a bright and even lighting on the picture. If you get a good catch you could share on twitter and tag me @kelly_Jowett !

Insect numbers do vary a lot with weather, time of year, and resources available. So the more samples you have, the more accurate your conclusions are likely to be. However, knowing a little is better than nothing- so even once is good. Please run at least one round of the 3 traps in one field, but you may repeat in the same location, or try a different field if you like.