



## Redlegged earth mite insecticide resistance testing

### Collection and postage instructions

Redlegged earth mites (RLEM) are an important pest of Australian grains and pastures. Chemical pesticides registered for their control are becoming decreasingly effective due to the evolution of resistance. Insecticide resistance to both synthetic pyrethroids and organophosphates is increasing and is now present across Western Australia, South Australia, and parts of Victoria. Resistance may appear as reduced efficacy of a pesticide (or complete failure of field applications). Resistance testing services are currently available from Cesar Australia at no charge to growers and advisors under a new GRDC funded project CES2010-001RXT. The following outlines instructions for the collection of RLEMs so they can be safely sent for testing.

#### What you will need:

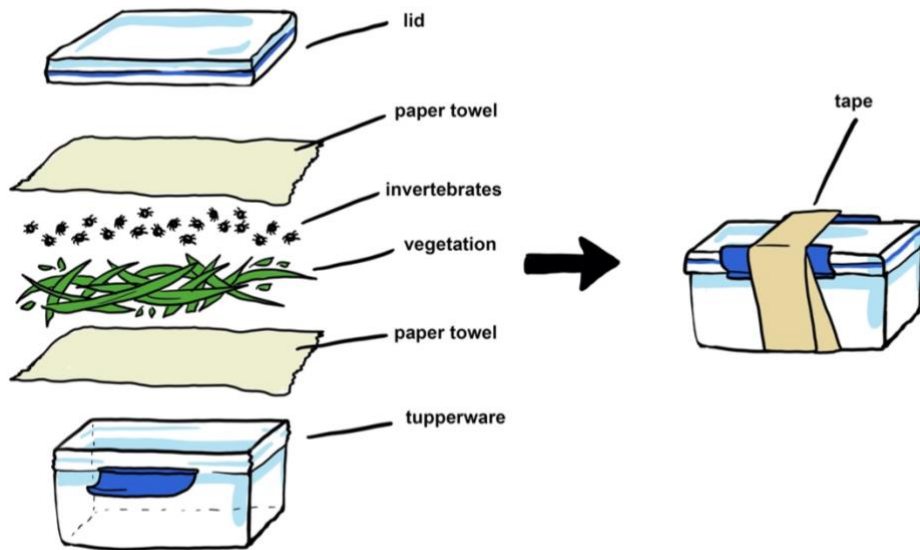
- A hard rigid plastic container (e.g. Sistema Klip it container) to stop mites from getting crushed in transit. To order a collection kit (container, labels and postage pack) contact [aarthur@cesaraustralia.com](mailto:aarthur@cesaraustralia.com) or 0427 875 0404.
- Paper towel to prevent condensation.
- Vegetation (e.g. capeweed, clover, grass) for moisture and food.
- Tape (if you have any handy) to ensure the container does not come undone.
- Bubble wrap (if you have it handy) to protect the container from damage.

#### What to do:

1. Place a layer of paper towel at the base of the plastic container.
2. Place a small amount of vegetation on top of the paper towel so that it is roughly covered.
3. Collect the mites from the paddock by tapping mite infested vegetation over the plastic container so that the mites fall into the container. If they are on the soil surface you could try and scoop them up with a spoon. If you are testing for SP resistance only 30-50 mites are needed, however for OP resistance screening a minimum of 200 alive and healthy mites are required (even more mites is better if they are in high numbers and are easy to collect).
4. Place a piece of paper towel over the plastic container and close the lid on top. The paper towel should be larger than the container so that it forms a seal between the lid and the plastic container.



5. Finish by wrapping the container in tape if you have any on hand to ensure the box does not come undone during transport.



6. Wrap the plastic container in bubble wrap if you have any available.
7. Place in an express post envelope and send mites to the following address (avoid sending on Fridays, so they are not in transit over the weekend – if collected on a Friday store the mites in a fridge over the weekend and post them first thing Monday morning):

Aston Arthur  
Cesar Australia  
Level 1, 95 Albert Street  
Brunswick VIC  
3056

8. Fill out the paddock/spray history and post with the package. The included contact details will be used to convey resistance results once mites have been tested.
9. For any additional questions, contact Aston Arthur on 0427875040 or [aarthur@cesaraustralia.com](mailto:aarthur@cesaraustralia.com).