

Redlegged earth mite insecticide resistance testing

Collection and postage instructions

Redlegged earth mites (RLEM) are an important pest of Australian grains, pastures, and vegetables. Chemical pesticides available for their control are decreasingly effective due to the evolution of resistance. Insecticide resistance in RLEM is increasing across southern Australia and resistance to both pyrethroids (SP) and organophosphates (OP) is now widespread across Western Australia and present in several areas within Eastern Australia. 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.

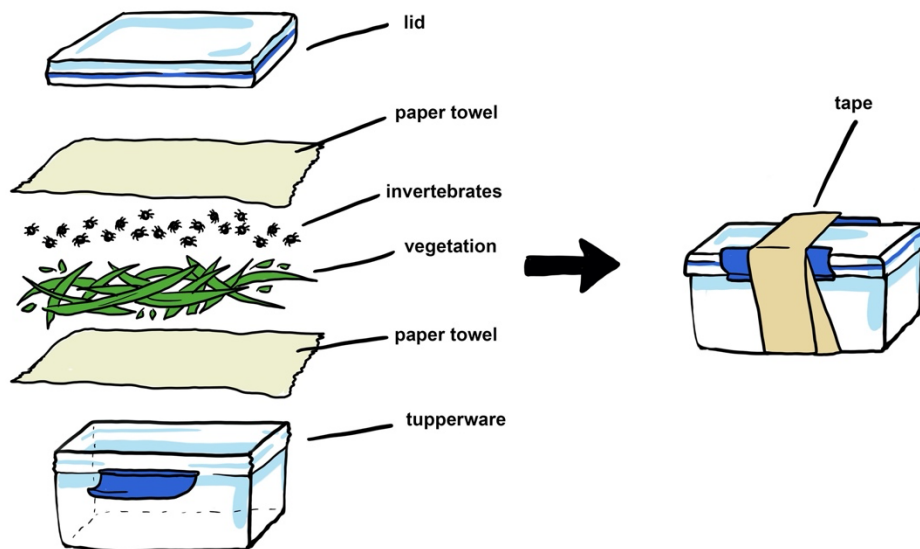
What you will need:

- A hard rigid plastic container (e.g. Sistema Klip it container) to stop mites getting crushed in transit. To order a collection kit (container, labels and postage pack) contact 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.

*This project is being led by Cesar Australia as part of the GRDC project “Future control options of RLEM in Australian grain crops”, which has been extended to red meat producers through co-investment from MLA and to pasture seed producers through co-investment from AgriFutures Pasture Seed Program (PRJ-013101). The wider project involves contributions from the Department of Primary Industries and Regional Development (DPIRD), the University of Melbourne, and CSIRO.