

# Sampling procedures and the transport of samples for testing or assays

## Pachymetra root rot and nematodes

Analytical service	Price per sample exc. GST as at 10 September 2013	
	Levy payer	Non-levy payer
Pachymetra root rot	\$50.00	\$100.00
Nematodes	\$50.00	\$100.00

### Follow these instructions to ensure an accurate result

1. Remove cores from the centre of the planting row in a current crop. Ideally nematode samples should be taken in the area where active root growth is occurring.
2. Sample to a depth of 25 cm.
3. At a minimum provide 8 samples per plot/crop.
4. Mix the soil from all cores thoroughly in a bucket.
5. Provide at least 300 g of soil.
6. Try to avoid sampling wet soil as this creates problems with mixing and sub-sampling.
7. Place the soil in a sealed plastic bag and clearly label the sample. Remember that felt pen on the outside of bags may rub off during transit.
8. Nematode samples need to be stored in a cool environment out of the direct sunlight.

### Submitting your samples for testing

1. Complete the Assay Request Form which can be found on the SRA website [www.sugarresearch.com.au/growers-and-millers/pests-and-diseases/](http://www.sugarresearch.com.au/growers-and-millers/pests-and-diseases/)
2. Before sending nematode samples, please contact Judi Bull at [jbull@sugarresearch.com.au](mailto:jbull@sugarresearch.com.au) or fax it to 07 4068 1907.
3. Attach a copy of the completed Assay Request Form to your samples.
4. Box your samples and clearly address the box to Sugar Research Australia, 216 Dallachy Rd, TULLY QLD 4854.
5. Pachymetra samples can be sent via Australia Post. Nematodes should reach Tully ASAP – send by overnight courier.

### Your results

Assay tests generally take 15 working days.

If you require a faster response please contact Judi Bull on 07 4088 0704.



*Effects of Pachymetra root rot.*



*Counting Pachymetra spores.*

## Ratoon stunting disease (RSD)

Analytical service	Price per sample exc. GST as at 1 <sup>st</sup> February 2017	
	Levy payer	Non-levy payer
RSD	\$2.20	\$4.40

### You will need the following equipment

- 1 mL titertubes and caps and 96-place storage boxes.
- A rubber milking machine inflation boot.
- An air compressor – either a 240 volt air compressor or a compressor that can be operated from a vehicle's 12 volt lighter. High-pressure compressors for car tyres are suitable.
- Sharp secateurs or long-handle, beak-blade lopping shears.
- A cooler box (esky) with a cooler block.
- Methylated spirits and cleaning rags.

### Follow these instructions to ensure an accurate result

- For extraction at headland or shed, collect the stalk pieces as close to the base of the stalk as possible and with at least 3-4 internodes.
  - Take extracts on the same day preferably in the morning. It is more difficult to collect xylem extract if stalks are allowed to dry out.
  - Cut a section of the stalk with one node from towards the base of the stalk. Cut one end square and one end at a 45° angle. If the stalk is dirty, clean the tip of the angled end and avoid getting dirt on the angled cut surface. It is important to keep the samples free from dirt and other contaminants.
  - Do not select insect-damaged, rat-damaged or rotten stalks. Avoid internodes with growth cracks where possible. If growth cracks are present, cut one end at a node.
  - Turn the air compressor on. Press the flat end of the stalk piece into the rubber holder. Allow the fluid that bubbles out of the stalk to run off the angled tip of the stalk directly into a tube.
  - This section is aimed towards growers:  
Collect extracts from up to 4 stalks in the one tube. A total of 16 stalks should be sampled from each field. This usually works out to be 4 stalks per corner.
- Collect approximately 0.6-0.8 mL of extract. The minimum acceptable amount is 0.5 mL of extract. Do not completely fill the tubes otherwise when they are frozen the caps will be dislodged.
- NOTE: Cane juice collected by squeezing stalks or with brix samplers is not suitable for RSD diagnosis.**
- SRA recommends that for an Approved Seed Plot:
    - Sample all varieties in the mother plot for RSD.
    - Sample at least 50-100 stalks per variety and bulk extracts into 12-25 samples. Varieties in plots <200m long require 10-50 samples per plot.
  - Label the tube clearly with a sample number and place in a 96-well storage box. Complete the sample sheet with the position in the box and the variety, crop class, block number, farm and district.
  - Store samples in a cooler on ice until you return to the office.
  - Clean and disinfect secateurs or lopping shears and the rubber holder between plots by wiping off organic matter and swabbing or spraying with methylated spirits.
  - Freeze the samples on your return to the office.
  - Complete the ELISA excel form, please put the bar code number in the file name. Fill out sample details and record the sample number.
  - Bar codes are to be placed on the top and bottom of the box. Please do not stick a bar code to the sheet and send it in with samples. Sample details will only be accepted electronically in excel format.
  - Save a copy for your records, send the excel form by email, as an attachment. Email to Amanda Johnson at RSDLab@sugarresearch.com.au
  - Package your samples in a cooler box (Esky) on cooler blocks. Send your samples to the SRA RSD laboratory at Indooroopilly, by Australia Post – Overnight express, a reliable courier or Air express.
  - Address your consignment to: Amanda Johnson, SRA, 50 Meiers Road, INDOOROOPILLY QLD 4068, Phone 3331 3333. Please write “RSD samples”. Do not write juice, soil or sap samples.

### Your results

RSD analysis generally takes 10 working days.