Sampling protocol

Reniform nematodes

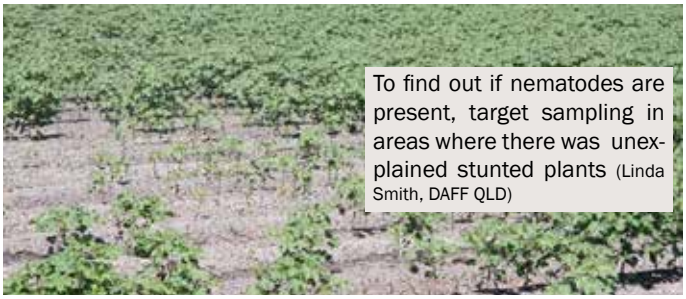
In late 2012, there was an identification of reniform nematodes (Rotylenchulus reniformis) affecting cotton across a number of fields and farms in Theodore in Central Queensland. Feeding causes damage to the plant resulting in stunting and generally poor plant growth. Further investigations are continuing to determine the extent and likely severity of this pest in the Australian cotton system. This sampling protocol has been developed so that growers and consultants can contribute samples to these investigations.

Bartley Bauer[1], Jenny Cobon[1], Linda Scheikowski[1], John Lehane[1], Linda Smith[1] & Susan Maas[2] ([1]DAFFQ, [2]Cotton Industry D&D Team/CRDC)

Presence/Absence Sampling

Where reniform nematodes have not been previously identified, growers and consultants across the industry are being asked to monitor for patches of unexplained unthrifty or stunted plants and send a sample of soil if concerned.

- Mark the patches with GPS or on a map so that they can be monitored next season.
- Scrape off the dry top soil and sample 10-15cm deep using a small trowel or soil corer.
- If there is more than one patch in a field, collect multiple samples from these areas in a bucket, mix thoroughly and subsample.
- Place approximately 400g in a clearly labelled plastic bag.
- See below for postage and handling details.



To find out if nematodes are present, target sampling in areas where there was unexplained stunted plants (Linda Smith, DAFF QLD)

Threshold sampling

Where reniform nematodes are known to be present on the farm a more strategic sampling method is required. This will help to inform researchers and farm management about populations in field, with a view to monitoring for increase or decreases in population. Nematode population and yield data will be collected and used to determine threshold levels, enabling advice on management. Growers and consultants are asked to submit samples on a field by field basis across the farm, even if some fields showed no signs of damage during 12/13.

- Sample as soon as possible after the beds are formed in the proposed planting area.
- Take samples in a zigzag pattern across the field.
- Take 40 samples in a 1ha field and place directly into a bucket.
- Scrape off dry top soil and sample between 10-15cm deep using a small trowel or soil corer.
- Mix thoroughly and subsample.
- Place approx. 400g in clearly labelled plastic bag.

Ensure soil sample is well labelled (Linda Smith, DAFF QLD)

Postage and handling

- Keep cool in an esky without an ice brick.
- Do not store samples in the fridge.
- Never send a sample on a Thursday or a Friday.

Label samples with permanent marker towards the bottom of the bag. Submit a summary sheet with sample details for cross referencing. Information that is required include:

- Sample site (including farm and field name and any GPS references):
- Date and time sampled
- Contact name, number and email address
- Identify if this is a presence/absence sample or a threshold sample.

Send samples and information to:

Jennifer Cobon
Level C2 West,
Ecosciences precinct
B3 Joe Baker Street
Dutton Park QLD 4102

Come clean. Go clean.

Don't spread nematodes. Clean all sampling equipment as well as vehicles & people.

Come clean. Go clean.

QUEENSLAND GOVERNMENT

Australian Government
Cotton Research and Development Corporation

myBMP This best practice information pack is located on the myBMP website www.mybmp.com.au

Best Practice