

Soil Information Day Wednesday 18 March

Agenda Kenya Station

9:00am	Smoko
9:30am	Ray O'Grady - It's time to focus on the importance of soil health in pasture production because 'we did not inherit the land from our ancestors - we are borrowing it from our children'.
11:30am	Peter Muller - Soil properties and Peter Burger rainfall simulation, Site One.
12:30pm	Lunch
1:00pm	Ray O'Grady - Understanding the grazed ecosystem to build a healthy soil, using regenerative grazing management.
3:00pm	Peter Muller - Soil properties and Peter Burger rainfall simulation, Site Two.
4:00pm	Talk to experts about your soil samples

Upcoming Events Desert Channels Qld

Weedspotters Workshops

Desert Channels Queensland is holding a series of Weedspotters Workshops across the region over April and May. This workshop will provide the practical skills and background knowledge for weed collection. Techniques will include:

- What to collect
- Labelling and descriptive information
- Safety and hygiene issues
- Handling plants during collection
- How to pack a plant press
- Drying specimens
- Packing and posting specimens

For more information contact Ron Beezley on ph 07 4652 7827 mobile 0428 580 629 or email ron.beezley@dcq.org.au.

Blackall Innovations Forum

Tuesday 21 April, Blackall Cultural Centre 10am - 6pm

These days we need to think of innovative ways to improve our bottom line! Desert Channels Queensland, The Blackall BestPrac Group and Grazing Best Prac invite you to participate in the inaugural Blackall Innovations Forum to showcase the successes in the region for NRM practices. Presentations and displays will include:

- Gross margins, cattle and sheep
- Water and fencing development
- Satellite pasture monitoring
- Medicated water units
- Rotational grazing
- Remote water monitoring - telemetry
- Wild dog control
- Property mapping/GPS
- Managing depression
- And much more

To request a flyer or for more information contact Colleen James on ph: 07 4652 7826 mobile 0428 580 998 or email colleen.james@dcq.org.au.

Coming soon - 3 Cs Carbon and Climate Change Info Days

As a grazer how does climate change affect me? Industry experts clear up some of the myths surrounding carbon and climate change. Learn more about these topics and take the opportunity to get your questions answered.

*Thankyou to John and Pam Seccombe of Kenya
Station for opening their property
and giving their time for
this information day.*

What management decisions based on soil type can improve my ground cover and how does soil type impact on pasture production?

Ray O'Grady is a pasture agronomist and specialist in managing soil health. Ray has a wealth of experience in conventional and regenerative farming and specialises in managing soil health with a thorough knowledge of soil carbon and methods of improving carbon cycling. Ray has worked with innovative landholders to implement regenerative land management techniques that enhance biodiversity, increase biological activity, sequester carbon, activate soil nutrient cycles, restore water balance, improve productivity and create new topsoil.

Session One

It's time to focus on the importance of soil health in pasture production because 'we did not inherit the land from our ancestors - we are borrowing it from our children'.

- Introduction to soil health
- Learning from the legacies of the past
- Dirt: The erosion of civilisations
- Sustainability and the triple bottom line
- The way it all works - the carbon cycle and soil carbon

Session Two

Ray O'Grady -Understanding the grazed ecosystem to build a healthy soil, using regenerative grazing management.

- The rhizosphere
- Troubles in the rhizosphere.
- Plant exudates in the rhizosphere
- The grazed ecosystem
- Mycorrhizae and grazing management
- Effect of mycorrhizae on pasture growth and phosphorus uptake
- Regenerative grazing that builds soil carbon
- Microbial nutrient cycling

NRW's leading soil scientist Peter Muller has over 20 years soils experience throughout Australia with a wealth of knowledge of soil types and their properties that affect pasture production in central Queensland.

NRW field scientist Peter Burger will be demonstrating filtration, ponding and run-off characteristics of various soils with the rainfall simulator.

Paddock Session Field Site One

The soil at this site is a typical cracking black to dark brown cracking clay of the Mitchell grass open downs plains. Its main features are:

- Deep soil with 1.6 m of soil that overlies the weathered mudstone parent material.
- Strongly cracking = good initial water entry.
- Thick, fine self-mulching surface soil and well structured subsoil.
- Alkaline profile throughout (pH 8.0 to 9.1).
- Good subsoil properties - only moderate salt and sodicity.
- No limitation to rooting depth.
- High clay content (55%) gives a high water holding capacity - 160 mm to 1.5 m.
- Moderate fertility - fair phosphorous, but low nitrogen and organic carbon.

The pasture is dominated by Mitchell grass with Flinders grass, button grasses and annual forbs. Some native legumes also occur.

Paddock Session Field Site Two

This soil is a hard setting, non-cracking, brown clay soil of the gidgee plains. Its main features are:

- Deep soil (>1.5 m) that has formed from transported material.
- Weakly structured, hard setting topsoil that surface seals.
- Weak, coarser structured, sodic and salty clay subsoil.
- Alkaline surface soil and upper subsoil pH of 8.8. The lower subsoil below 1.0 m becomes acidic (pH 6.6 - 5.6).
- Sodic (dispersive) subsoil impedes water movement.
- High subsoil salts limits rooting depth to 0.9 m.
- Medium clay content (45%) gives a lower water holding capacity of 105 mm.
- Moderate fertility - fair phosphorous, but low nitrogen and organic carbon.

The site has a buffel grass pasture that has been sown after clearing the gidgee scrub.

Your soil sample analysis

- pH and salt content testing
- Talk to soil experts about your samples
- Run your soil samples through the rainfall simulator (number of samples analysed subject to time and water availability).

From a ground-cover point of view, what are the issues, limitations and benefits associated with a particular soil type?