

# Soil Health Update

November 2009

This newsletter is going out to all people who subscribed to the Soil Health days or have asked to be included to receive information on soil health.

*The purpose of this newsletter is to provide the latest information on Soil Health, recent events, demonstration farms and upcoming events.*

## A day with Maarten Stapper

A recent Soil Health Group event at Coleraine, saw over 110 people crowd the football club rooms to hear Dr Maarten Stapper speak on his research and experience with improving soil health.

Dr Maarten Stapper, Farming Systems Agronomist, spoke with passion about healthy soils, soil biology and the impact of poor soil health on plants, animals and humans.

According to Maarten Stapper, soil is the foundation of life on earth.

“Living healthy soils don’t degrade,” Maarten said. “Low soil organic carbon and poor soil biology create dead soils. These soils have poor structure, compaction, low infiltration, carry soil borne diseases and are prone to erosion, acidity and leaching.”

“We need to change our management to get this soil biology functioning. We need to work with nature, rather than being at war with nature. The nutrients are in the soil but the biology is inactive. We need to reactivate this biology.

### What is a healthy soil?

A healthy soil is one where the physical, chemical and biological components of the soil are all in balance. The soil is in harmony. It is like a big sponge filled with water, air, soil organisms and minerals. It is high in organic matter with active, abundant and diverse soil biology. It is not compacted. Instead it is aerated with high water infiltration and deep, dense root growth.

In the past we have been trying to produce quantity rather than quality. Biologically active soils improve mineral and nutrient density which the plants and animals feeding on those plants need. Animals whose requirements are met with quality feed require less time for grazing and are more healthy and contented.

Microbes are beneficial to the soil as they have a symbiotic relationship with the plant. What is good for the plant is also good for the microbes and vice versa. The microbes protect and feed the plants. They glue a soil barrier around the plant roots which protect the roots from pathogens such as crown rot and root nematode.



Thankyou to our generous sponsors;  
BEST, National Australia Bank, Glenelg Hopkins CMA and Caring For our Country.  
This event could not have run without your help.



[www.networksw.com.au](http://www.networksw.com.au)

There are over 20,000 species of microbes. They are an important link the food web and are very sensitive and easily killed. If we destroy the soil microbes we create holes in the food web which in turn affects all biodiversity.

Soil biology can be improved by applying humates, fulvic and humic acids, sea weed, molasses and fish proteins.

Carbon is the most important chemical component in the soil. If there is less than 2% carbon there is very variable production in total dry matter yield. If there is greater than 2% carbon you will get maximum yield.

For every 1% soil organic carbon (SOC) in the topsoil, there will be 25mm of water available, an increase of 150kg of nitrogen available per hectare. It was originally thought that it takes 40 years to increase SOC by 1%. However it is now thought possible to increase soil carbon within a few years with good soil management. Healthy plants make carbon. The microbes decompose the carbon, especially the worms which leave 'new soil' in their worm casts.

Another very important part of the soil is calcium (Ca). The plants need Ca for strong cell walls. Active soil fungi help make calcium available to the plants. The calcium to magnesium ratio (Ca:Mg) need to be 3:1 in sandy loams and 5:1 in clays.

### Pasture Management

Rotational grazing is important to ensure the plants have adequate time to recuperate. The plant needs leaf growth before it can grow roots. If the shoots are consistently eaten off, as they are when set stocking, the plant can't get the roots growing.

Look at your plant roots. They will tell you the story. Are the roots naked or do they have soil glued to the roots? Look at the root density and length and number of the roots. The roots should be long and dense. If you have sown seed, see how many roots are coming out of the seed. There should be four to five roots coming out to explore the soil.

Also the more species in a pasture, the better it is for the animals as each plant species has different levels of certain minerals. Animals have the ability to pick and chose the plants as to their mineral requirements. Have a look at what your animals are grazing when they first enter a fresh paddock. This gives a good indication as to what minerals they are lacking."

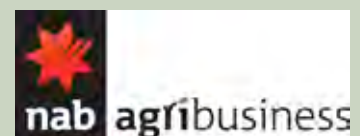
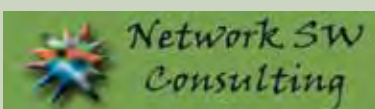
Maarten quotes Professor Linus Pauling, Nobel Prize winner in 1948 who said "Every sickness, every disease and every ailment can be traced to a mineral deficiency." Maarten adds "...and the chemicals we eat, drink and breathe."

"If we have healthy soils, they will adapt to the impact of climate change. If we have healthy soils we will have healthy plants, healthy animals and healthy humans. If we have healthy soils we will be sustainable in the future."



**Dr Maarten Stapper - demonstrating what to look for in a healthy soil.**

For further information:  
Website : <http://BioLogicAgFood.com.au>  
or see the Soil Health Group page on  
[www.networksw.com.au](http://www.networksw.com.au)



CARING  
FOR  
OUR  
COUNTRY



# Soil Health Group Update



The review sheets and feedback we received from 'A Day with Maarten Stapper' has been excellent and very supportive. Apart from the heat, which was totally unseasonable and unforeseen, we had an informative and inspiring day.

As we said at the field day, the Soil Health Group does not endorse products. We are however extremely grateful to our sponsors of the event as we would not have been able to put on the day otherwise. Our sincere thanks go to BEST, NAB and the Glenelg Hopkins CMA, through Caring for Our Country funding. Thankyou for your support and also the wonderful prizes you provided for the day.

Lucky prize winners were;

- Marita Cox and Rodney McFarlane both won a bag of goodies, including some very nice books, a rain gauge, USB and other nice material provided by NAB, Network SW and Glenelg Hopkins CMA.
- Jorge Bernhard won ten litres of BEST TM21, a prize worth \$500!

After the 'Day with Maarten Stapper', we have 36 families who are now members of the Soil Health Group. As you know, the Soil Health Group is only a couple of months old so we believe this group will only continue to grow. Our aim is to provide you with as much information about soil health as possible to help you make informed decisions for your farm. Any one wishing to join us can fill in the membership form at the end of this newsletter.

From the review sheets, many of you said you would like to see more field days, speakers and informal BBQ's and farm walks.

So it is with this in mind that we are holding an informal 'Members event' BBQ on Friday 4th December (the evening before 'World Soils Day!'). The whole purpose of the night is to 'chew the fat' about soil health and chat about what people are trying, what has worked well and what hasn't. Tim Watt, private soil health consultant, will be joining us to contribute his experience.

This a 'members only' event. If you are not yet a member and would like to come along, we will accept membership on the night. Further full details are later in this newsletter

We are also assisting the DPI with a Soils Workshop at Tahara on 15th December. Full details on this event are also later in this newsletter.

Membership is only \$40 per family for the year and entitles you to;

- 4 newsletters a year,
- Advanced notice of upcoming events,
- Discount to events,
- Vote at the Annual General meeting
- Participation in informal members farm walks and BBQ's

A membership form is attached to this newsletter.

This group is a not for profit group and relies on funding to continue the good work on raising the awareness and understanding of soil health. We hope you will join us.

If you do not wish to receive this newsletter in the future, please contact Gill Fry, P: (03) 5573 4539 E: [gill.fry@networksw.com.au](mailto:gill.fry@networksw.com.au)

For further information on soils, check out the networksw website. It is updated frequently and there will be even more information coming soon

# Soil Health Group



## Next event.....

Come and celebrate 'World Soils Day'

When	Friday 4th December
Where	<b>Yulecart Hall</b> , Hamilton- Digby Rd, Yulecart (about 6kms from Hamilton)
What	<b>Members Only</b> - Informal BBQ Bring your partner and kids! Informal discussion on what has been tried, what works well, what doesn't.
Time	5.30pm onwards
Cost	<b>FREE for members</b> (You can sign up for membership on the night - cost \$40) BYO <ul style="list-style-type: none"><li>• meat,</li><li>• drinks,</li><li>• chair,</li><li>• salad or sweet to share.</li></ul> <p>We provide crockery &amp; cutlery. No need to RSVP - just come along! Look forward to seeing you there.</p>
More info....	For further information contact Gill Fry Executive Officer, Soil Health Group Ph: 5573 4539 Email: <a href="mailto:gill.fry@networksw.com.au">gill.fry@networksw.com.au</a>

# Invitation – Dept. of Primary Industries Tahara Soils Workshop



## Tahara Soils Workshop

**Do you understand your soil tests? Come along and learn about your most important asset**

The department of Primary Industries are conducting a workshop to help understand your soil and its importance to healthy plants and crops and healthy livestock production.

Guest speaker **Bernard Noonan**, DPI's Soil Health Officer at Horsham will discuss soil health including managing, and recognising biology in soils.

A soil pit will be used to demonstrate the different profiles in our soil and its impact on what and how our plants can grow in and how it is affected by different soil properties.

**Mary Knight**, Soil Health Officer at Hamilton will demonstrate some field testing of soils for pH and electrical conductivity (EC) analysis as well as measuring soil texture.

Bring soil samples with you to look at and test.

**Bill Stonnill** DPI Whole Farm Planning Officer at Hamilton will give an introduction to the Whole Farm Planning services available to landholders including the use of E-farmer and how it relates to managing our resources.

**Date: 15th December 2009**

**Time: 4pm to 6.30pm**

**Venue: "Coolangatta" 3120 Condah Rd Coleraine**

cfa ref: reg 4 map 431 E26 then **Tahara Recreation Reserve.**

**Cost: Free,**

**Tahara Cricket Club to run BBQ after the workshop, @ \$10/per**

**RSVP: 14th December 2009**

**Bill Stonnill 0427 077734**

**[willam.stonnill@dpi.vic.gov.au](mailto:willam.stonnill@dpi.vic.gov.au)**

Accessibility assistance, including reserved parking, Auslan interpreters and attendant carers can be made available at this event. When confirming your attendance, please tell us if you require these or other supports. To help us ensure that your needs can be met, please tell us of any requirements when you RSVP.

