

# SOIL MICROBIOLOGY

## Understanding the soil conditions and tailoring the application to your site will ensure a better outcome for your project.

Before Valley Hydramulch & Revegetation takes on a project, the first thing we do is ask ourselves, “OK, what are we dealing with here?” We like to gather as much detail as we can about the site so we can provide the best solution for our clients.

### WHAT IS SOIL TESTING?

Soil Testing is where we take a sample of the soil on your site and send it away to Sydney Environmental Soil Laboratory (SESL), who then use their expertise to uncover what nutrients are deficient in the soil. We use this information to tailor the mix to your site. For instance, if the test results indicate a poor-quality soil, then specific ameliorants can be added to the application. This improves the soil microbiology, providing optimal conditions for successful germination, growth and the desired revegetation outcome.

### INVESTING IN SOIL TESTING

There is a common misconception that soil testing is purely a mechanism by which costs can be increased without improving results. However, the money ‘saved’ by not investing in soil analysis is spent many times over in long-term rectification and management after the works have been completed.

## EFFECTIVE SOIL PREPARATION

Another important part of the process is to ensure good surface preparation is carried out prior to spraying the application. This ensures the best possible result is achieved.

In 2005, Valley Hydramulch & Revegetation developed a process which has always proven effective when our recommendations are followed. We engineered specialised batter chains with ripping bars fixed at 450mm centres, which are utilised in two stages:

- ✓ The chains are used to lightly scarify the subgrade prior to the placement of topsoil. After several passes, the chains produce a loose soil bed with horizontal furrows that has been keyed into the subgrade. They
- ✓ are then used again to spread the topsoil layer to an average thickness of 50-100mm.



*Our batter chains with ripping bars in action*

## AMELIORATED APPLICATIONS

Our ameliorated applications include organic and inorganic fertilisers, microfine lime, microfine gypsum and AS4454 screened compost.

When a fine organic compost is included in the mix, the microbiological action of the compost penetrates the soil profile with the other ameliorants, releasing the soil nutrients and improving uptake of these nutrients in the plant roots. As this process results in the rejuvenation of the soil chemistry and microbiology, it is not time-limited and so provides long-term nutrition for the developing plants.

## OUR APPROACH IN ACTION

On Wave 1 Woolgoolga to Ballina Pacific Highway upgrade works, the specified Straw Application was a dismal failure, washing off the batters and into drains during rainfall common to the site throughout most of the year. Our approach, however, proved effective even on bare clay fill batters without topsoil.

Valley Hydramulch & Revegetation's approach to soil testing and conditioning was subsequently approved for 500,000 sqm of alignment clearing and grubbing on the upgrade section between the Iluka Turnoff and Devil's Pulpit.

Whilst unseen, soil microbiology is an essential consideration for successful revegetation. Soil microbes break down organic matter, recycle nutrients, create humus and soil structure, fix nitrogen, promote plant growth and control pests and diseases.



*Light Compost Blanket Woolgoolga to Ballina*

## OUR PROMISE TO YOU

Working with some of Australia's most reputable soil laboratories (SESL), we have developed a proven methodology that delivers cost-effective, long-term solutions to your revegetation and erosion control challenges.

We are happy to chat with you and answer any questions you may have, to help you find the right solution for your site, because you deserve sustainable grass growth without the need for re-works.

## No shortcuts. Just long term results.

Contact us for detailed technical support material, project records, photographs and drone footage of these and other major works completed by Valley Hydramulch & Vegetation since 1981.



**VALLEY HYDRAMULCH  
& REVEGETATION**

TRUSTED SOLUTIONS SINCE 1981

**553 East Seaham Rd  
East Seaham NSW 2324  
P. (02) 4988 6111  
E. mail@vhr.net.au**