

# Product Profile

# AquaBoost

WATER RETENTION AGENT



## Introduction to AquaBoost™ Technology

AquaBoostAG is an organic compound Bio-Polymer Anionic Polyacrylamide, (PAM), utilising polymeric stabiliser technology, which can reduce excessive leaching of water through sandy soils.

Polyacrylamides are long chain carbon molecules that can alter the behaviour of water in soil, acting like a "reservoir" at root level to soak up water more effectively and hold it in place in the soil.

AquaBoostAG™30 is an anionic polyacrylamide.

The Product is available in Powder (AG150) for pre-plant applications and Liquid (AG30) for irrigation applications.

By adding AquaBoostAG30 to the irrigation process it can increase water retention in the root zone of sandy soils where the water is most needed, reducing the frequency of irrigation, thus saving substantial amounts of water.

In vineyard trials conducted over the 2003 and 2004 seasons significant reductions in the water requirements were recorded using AquaBoostAG30. Other important benefits were also observed including reduction in salinity level. [See Trial reports attached]

Shane Phillips, Senior Horticulturalist at Tandou, conducts research on crop development in the Riverland. He holds a Bachelor of Agriculture Science Degree and has completed his Masters in Business Agriculture, and is a post graduate research student at Adelaide University in the Department of Natural Resources. He has worked with polymer additive products for nearly ten years and has conducted trials with AquaBoostAG in the Riverland region of South Australia.



His research with PAM's and AquaBoostAG indicates that uptake of this refined technology product could well become common practice for all irrigators in the not-too-distant future.

Drip irrigators report that using AquaBoostAG30 in their irrigation water promoted a wider wetting pattern. The result, reduced water and nutrient stress, because of water contact with a larger portion of the root zone, slower water and nutrient "pass-through" time and, thus, better water and nutrient absorption.

The ability of AquaBoostAG150 to increase lateral spread of water during water infiltration is particularly useful for early season water conservation and increased efficiency from rainwater. Only small amounts of water are needed to germinate seed or sustain small seedlings in the early weeks after planting. This is accomplished by not having to completely fill the soil profile because wetting patterns of AquaBoostAG150 spread further laterally for a given volume of water applied.



## AquaBoost™ Eco-Technology



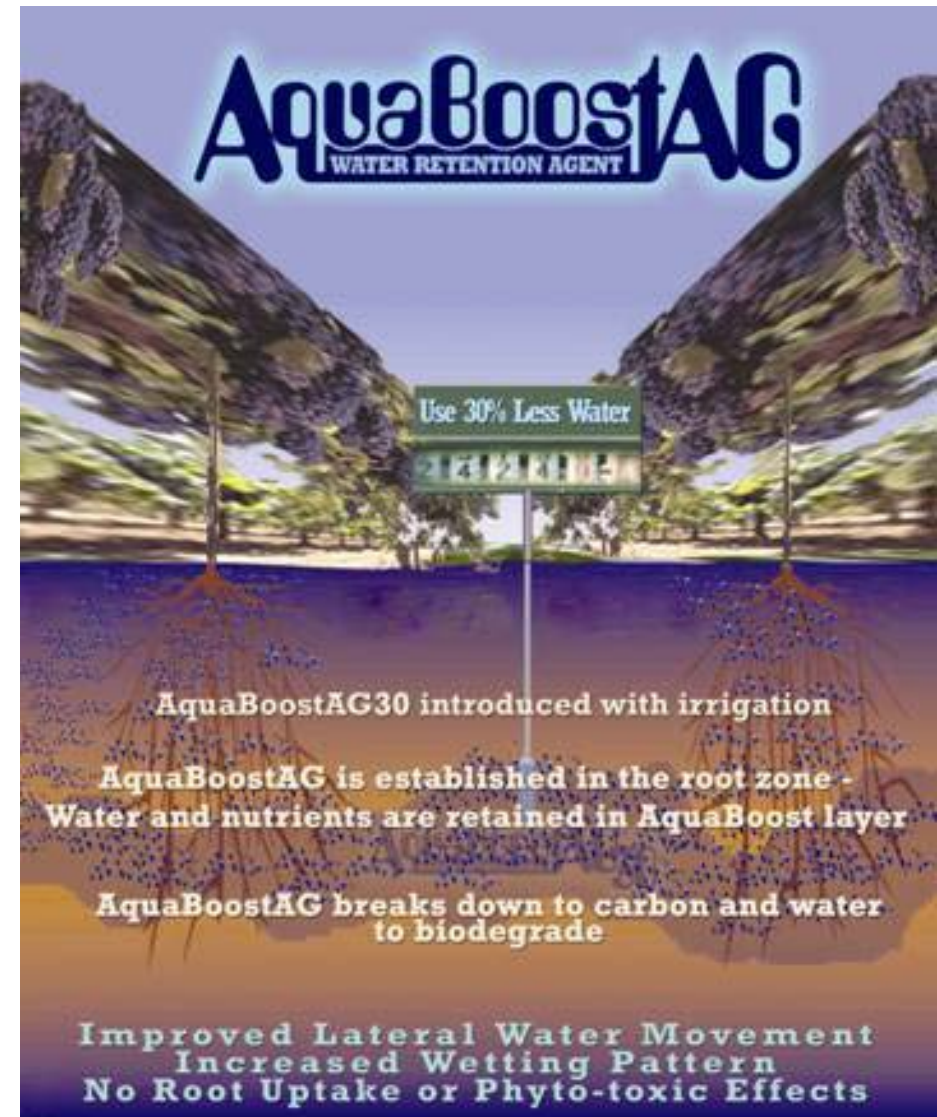
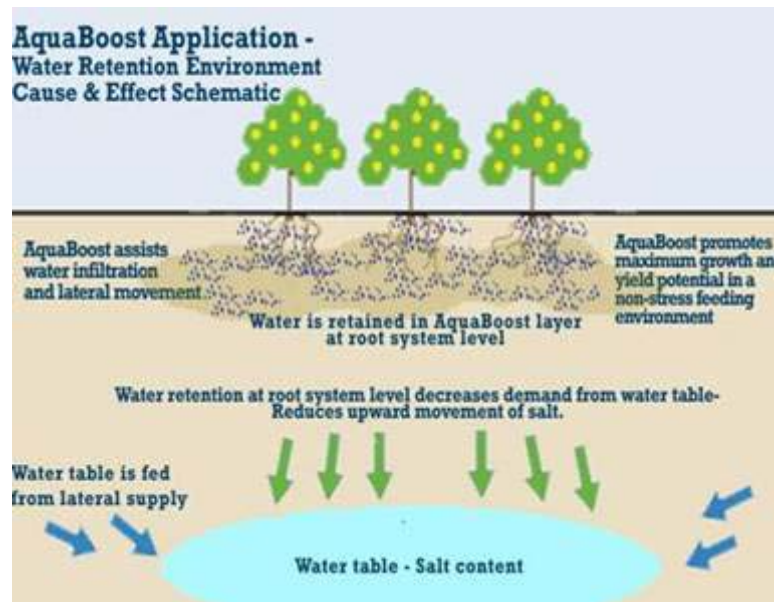
Many production and environmental problems in Australia's irrigated agriculture relate to the movement of suspended silt and clay during surface irrigation. These fine suspended mineral solids are transported within and sometimes away from irrigated fields. Some fines are redeposited on the soil surface during infiltration, forming surface seals that impair infiltration. The fine solids carry nutrients and pesticides and, when transported off fields, they become the dominant mechanism for contamination of riparian surface waters or waters delivered to users downstream. For this reason, much potential exists in Australia for substantial environmental and agricultural benefit from AquaBoost AG30™.

Recent research on AquaBoostAG has shown no adverse effects on soil microbial populations.

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By using AquaBoostAG irrigators will be able to reduce the amount of fertilisers they use and also the amounts of herbicides and soil pesticides used to prepare for sowing.

Another important environmental and applicator consideration is the need to reduce salt levels which adversely affect crops and trees. AquaBoostAG is one technological answer to lowering the salt table by eliminating the constant demand by root systems on the underground water table.





**BioCentral Laboratories Ltd**  
61 8 8234 8886  
[www.biocentral-labs.com](http://www.biocentral-labs.com)