

Wetting Agents – you get what you pay for

Background on trials

For the past five years Scotts have contracted an independent research facility – Lincoln University in New Zealand, to test all available granule and liquid wetting agents. The tests have focused on a wetting agent's effects on re-wettability and water holding capacity of a variety of potting media.

These tests were commissioned with the aim of internal product development and to ensure Hydraflo performed as a premium product against competitors. It is a clear fact with wetting agents (and most other things in life) that "you get what you pay for!"

The trials

The trials were conducted using the protocols developed for the Australian Standard, in addition, pots with the various treatment were kept in greenhouses and watered as normal nursery practice for ten months.

The various products were applied at the manufacturers' recommended rates and were all incorporated into the pine bark based growing media (supplied by a reputable commercial supplier). The trial was replicated to give statistically reliable results. We have chosen not to name the products trialed, but all are sold to professional growers either in Australia or New Zealand. One performed worse than not using a wetting agent at all!

Results (for five replicates) are measured by the effect of the addition of wetting agents on the wettability and water retention of a dry potting mix. Wettability is measured as the time required (seconds) for 10ml of water to soak into the dry potting mix. Water retention is the amount of water to 400ml of dry potting mix compared to the amount retained following dunking. Both of the graphs opposite express the results as the percentage change for the treatment as compared to control (no wetting agent added).

Summary of results

For the three separate trials conducted to date the performance of any product relative to the others did not change. If it was poor in the first trial, it was poor in the subsequent trials.

It is very clear from these studies that a premium wetting agent such as 'Hydraflo' will allow a potting mix to absorb more water without reducing air filled porosity. This will allow less frequent watering and gives greater water efficiency.

By allowing free water to drain from water logged pots, a quality wetting agent will provide an ideal air to water ratio in the root zone and encourage faster, healthier growth. By preventing water logging the risk of acidification of the media and subsequently possible manganese toxicity is avoided, as is nitrite toxicity. You can grow small and large pots in the same irrigation zone.

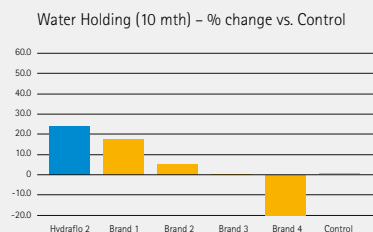
Even re-wetting of dry pots (quickly) and preventing water 'channeling' with drippers increases water use efficiency and encourages faster growth by providing water, and therefore nutrient contact with more feeder roots and minimise losses. Hydraflo L liquid can easily be applied through the drippers for large pots.

At approximately \$3.50 per cubic metre for Hydraflo 2 you would need to save only one 160mm pot plant per cubic metre for it to have paid for itself. Hydraflo improves water efficiency and provides an improved air to water relationship to encourage faster, healthier growth and is fully effective for over ten months.

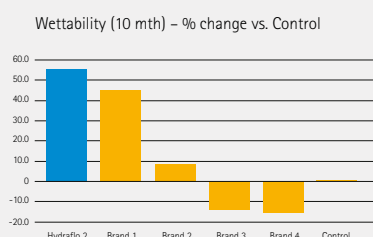
With Hydraflo you get much more than what you pay for!



Hydraflo 10 month trial



Hydraflo 2 after 10 months allowed a dry mix to absorb 23% more water than control



Hydraflo 2 after 10 months rewetted a dry mix 53% faster than control