

Advanced Hydrogel for Improved Ornamental Shelf Life



Research conducted by William C. Fonteno, Brian E. Jackson and Laura E. Kaderabek, North Carolina State University Department of Horticultural Science, Raleigh, NC

Trial date: February 2014 – May 2014

Crop: Coleus (*Solenostemon scutellarioides* 'Kong Salmon Pink') and Vinca (*Catharanthus roseus* 'Cora Apricot')

Benefits achieved with STOCKOSORB®:

- Increased water retention in growing media to reduce irrigation frequency
- Greater tolerance to dry conditions
- Longer time to wilt, improving shelf life

STOCKOSORB®
water + soil management

Distributed by Greener Solutions International

Advanced Hydrogel Trial

Effects of STOCKOSORB® gels on timing and severity of wilt in container-grown annuals

Trial date: February 2014 – May 2014

Crop: Coleus (*Solenostemon scutellarioides* ‘Kong Salmon Pink’) and Vinca (*Catharanthus roseus* ‘Cora Apricot’)

Application Rates

Forty-eight plugs each of coleus and vinca were potted into substrates containing 3 parts peat moss; 1 part vermiculite; 1 part perlite, with no hydrogels incorporated (control) or with 34 or 67 g/ft³ of two different hydrogel particle sizes: micro (MI): 0.2 mm – 0.8 mm, and medium (ME): 0.8 mm – 2.0 mm of STOCKOSORB® 660 hydrogel.

The effective rates were 0, 2 and 4 pounds of hydrogel per cubic yard. Plants were placed on a greenhouse bench and arranged in a complete randomized block design with nine replications per treatment.

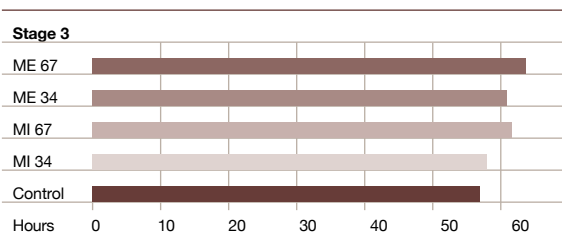
Method

To assess wilt, plants were placed in a large plastic tub to saturate the substrate before allowing the plants to dry down. Tap water was incrementally added to the tub to saturate the substrate until the water level reached just below the rim of the containers. The containers were allowed to saturate for ten minutes. They were then removed from the tub, allowed to drain for 10 minutes, weighed and placed on a greenhouse bench. Plants were not irrigated after this point and were allowed to dry under normal greenhouse conditions so that the degree of wilt could be observed.

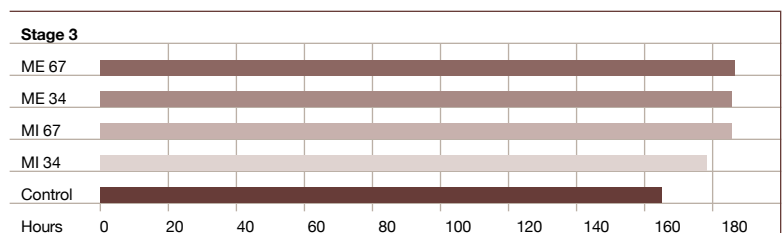
Conclusion

Both coleus and vinca stood up much better to dry conditions when hydrogel treatments were used. The hydrogel-amended plants had a 10-hour extension between saturation and Stage 1 wilt compared to the controls, which included no hydrogels. This equates to an entire extra day’s worth of protection at retail.

Hours to wilt stage – Coleus



Hours to wilt stage – Vinca



Graph Key: MI 34 = micro size hydrogel @ 34 g/ft³ MI 67 = micro size hydrogel @ 67 g/ft³ ME 34 = medium size hydrogel @ 34 g/ft³ ME 67 = medium size hydrogel @ 67 g/ft³

This information and all technical and other advice are based on EVONIK’S present knowledge and experience. However, EVONIK assumes no liability for such information or advice, including the extent to which such information or advice may relate to third party intellectual property rights. EVONIK reserves the right to make any changes to information or advice at any time, without prior or subsequent notice. EVONIK DISCLAIMS ALL REPRESENTATIONS AND WARRANTIES, WHETHER EXPRESS OR IMPLIED, AND SHALL HAVE NO LIABILITY FOR, MERCHANTABILITY OF THE PRODUCT OR ITS FITNESS FOR A PARTICULAR PURPOSE (EVEN IF EVONIK IS AWARE OF SUCH PURPOSE), OR OTHERWISE. EVONIK SHALL NOT BE RESPONSIBLE FOR CONSEQUENTIAL, INDIRECT OR INCIDENTAL DAMAGES (INCLUDING LOSS OF PROFITS) OF ANY KIND. It is the customer’s sole responsibility to arrange for inspection and testing of all products by qualified experts. Reference to trade names used by other companies is neither a recommendation nor an endorsement of the corresponding product, and does not imply that similar products could not be used. STOCKOSORB® is a registered trademark of Evonik Stockhausen GmbH.



STOCKOSORB® is an MPS listed product.

Greener Solutions International is the exclusive North American outlet for STOCKOSORB® 660.

Greener Solutions International | P.O. Box 1373, Hebron, CT 06248

Phone: 860.368.9643 | gsgreen.com | info@gsgreen.com