

# New media-applied humectant can improve plants' drought resistance

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Severe wilting of bedding plants in retail display areas is a common situation that often causes growers to lament about the degradation of the plants' appearance after they leave the greenhouse.

The poor appearance at the retail level is also thought to reduce demand for bedding plants. Too frequently, personnel at retail garden centers and mass-merchandise stores are too busy to perform needed routine maintenance of plant material, and often bedding plants are not irrigated until they are wilting.

At the University of Florida, Terril Nell and I have been evaluating Hydretain, a water-management product that

wilted, for the second time, two to three days later, and the medium absorbed more water when it was irrigated.

Vinca also lasted longer when treated with Hydretain. The plants given Hydretain at the 1:10 dilution wilted first at eight days, compared to four days for the non-treated plants, and second wilt occurred at 14 days, compared to eight days for the water-only plants.

In these trials, Hydretain was impressive in delaying wilting. The manufacturer indicated that Hydretain is a humectant, allowing it to hold more moisture in the medium.

Minor precautions avoid problems

We have performed additional studies with Hydretain and have found few problems with its application.

It does not burn foliage when applied directly to leaves. On occasion, we have seen slight wilting of plants immediately after treatment with the 1:5 dilution when Hydretain was applied during hot conditions. Therefore, dilutions of 1:10 will most likely be the recommended rate. When a slight overtreatment occurred, it was alleviated by watering and there were no observable problems.

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**Table 2**  
Hydretain treatments on 'Super Elfin Red' impatiens in 4-inch pots

Hydretain dilution <sup>1</sup>	Days to first wilt <sup>2</sup>	Water absorbed <sup>3</sup> (ml)	Total days to second wilt <sup>4</sup>
Control	3	148	5
1:20	3	132	5
1:15	4	172	8
1:10	4	167	7
1:5	5	121	7

<sup>1</sup> Each plant received 90 ml (3 fluid ounces) of Hydretain solution. Control plants were given plain water.

<sup>2</sup> Days from treatment to wilt.

<sup>3</sup> At first wilt, plants were given 180 ml (6 fluid ounces) of water. This was amount retained in media.

<sup>4</sup> Total days from treatment to second wilt.

is applied to growing media as a liquid, so plants can be treated by growers just before they are shipped.

Hydretain has been developed by Ecogel USA, 5001 Rio Vista Ave., Tampa, Fla. 33634; (813) 886-5700. It is now available to growers.

In our research, Hydretain was diluted in ratios of 1:5 to 1:20, and 3-ounce solutions of these ratios were poured into 4-inch pots containing geraniums, impatiens or vinca. The plants were grown using standard production practices and were at marketable size when treated. After treatment, plants were placed under heavy shade cloth to represent a typical retail area. Plants were not watered until they wilted.

Geraniums given plain water lasted five days, while the treated plants went nine to 11 days before wilting.

For impatiens, plants were held until they wilted a second time. The impatiens given Hydretain at 1:10 and 1:15

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