Floralife®
RESEARCH UPDATE
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Vase Life Study on Water Type-Specific eZ Dose™ Flower Food

Background

Floralife® eZ Dose™ flower food formula is ideal for use as a holding solution or as a shipping solution. One of the main functions of flower food, such as eZ Dose™, is to adjust the pH of water to a range where it is taken up effectively by flowers. Research has shown that cut flower stems take up water (or flower food solution) most effectively at a pH 3.0 to 5.0. The quality of water (especially alkalinity) largely determines the final pH of the solution after flower food has been mixed. Alkalinity is a true measure of the buffering capacity (ability to resist pH changes) of water. A higher alkalinity means that the water contains a possible combination of high concentrations of carbonates, bicarbonates and hydroxides that resist pH changes. The alkalinity of water can vary considerably depending on the location and water source. Water with high alkalinity has more buffering capacity, therefore, resists the lowering of pH by flower food. On the other hand, pure water (with low alkalinity) has less buffering capacity, and flower food can lower the pH to too low a level. Floralife® has developed three different eZ Dose™ flower food formulations for maximum effectiveness in different water types by optimizing the acidifier for each water type. eZ Dose™ Pure flower food is suitable for water with pure alkalinity (less than 60 ppm), eZ Dose™ Regular flower food for medium alkalinity (60 to 180 ppm) and eZ Dose™ Hard flower food for high alkalinity (more than 180 ppm).

Research

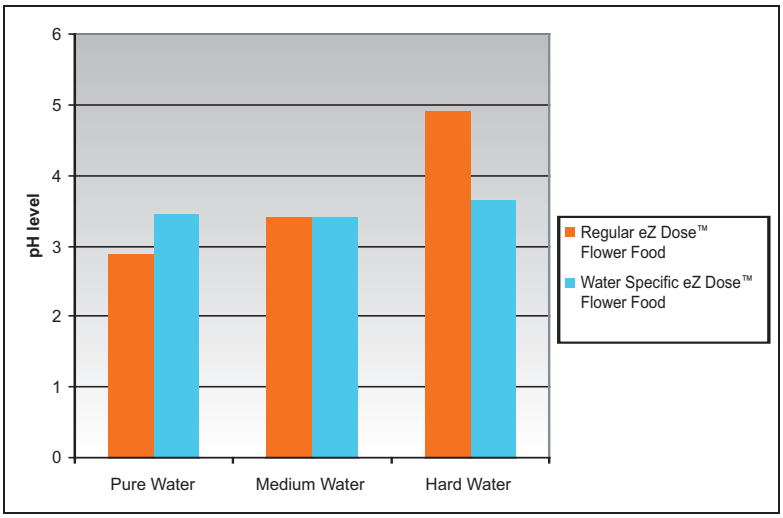
A vase life study was conducted at Floralife® Postharvest Laboratory to investigate the effectiveness of water type specific eZ Dose™ flower food in their respective water types. The following treatments were included:

1. eZ Dose™ Pure flower food: in deionized water (alkalinity 0 ppm)
2. eZ Dose™ Regular flower food: in standard water (deionized water added with salts, alkalinity 80 ppm)
3. eZ Dose™ Hard flower food: in tap water (alkalinity 240 ppm)
4. Control (standard water)

Results

pH of the Flower Food Solution

The following graph shows the final pH of the solution when eZ Dose™ Regular flower food or the respective water specific eZ Dose™ flower food was dissolved in different water types.



Water type specific eZ Dose™ flower food can adjust the pH of extreme alkalinity water better than regular eZ Dose™ flower food.

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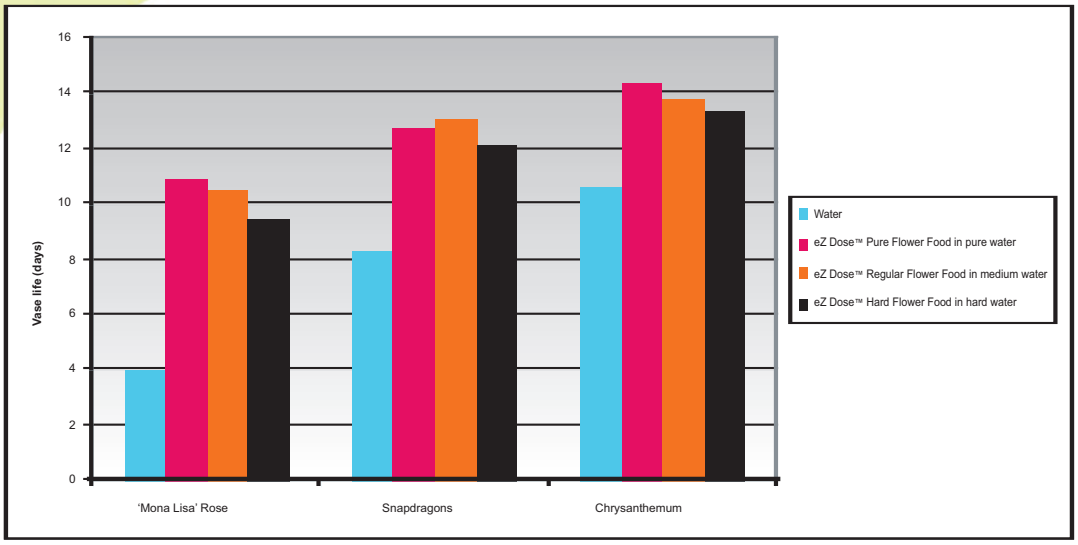
Vase Life of Flowers



Water | **eZ Dose™ Pure Flower Food in pure water** | **eZ Dose™ Regular Flower Food in medium water** | **eZ Dose™ Hard Flower Food in hard water**

Day 7

Conclusion

Water specific eZ Dose™ flower food formulations can correctly adjust the pH of water with different alkalinity to a range optimum for cut flowers. All water specific eZ Dose™ flower food formulations improved the performance of cut flowers tested.

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For more information or to download a copy of our "Care and Handling Manual" online, visit www.floralife.com. Questions? e-mail: info@floralife.com

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