Research Update powered by FloraLife

Effect of Combined FloraLife® Shield Ultra and FloraLife® EthylGuard Ultra on the Postharvest Quality of Spray Roses

January 2025

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Introduction:

Spray roses are a type of rose that generally have a shorter vase life compared to standard roses. Depending on the variety, they are susceptible to fungal diseases such as botrytis and early senescence. There are reports that spray roses are in general ethylene-sensitive although this sensitivity may vary depending on the cultivar. Ethylene can affect flower opening and the water balance, inducing senescence effects such as color changes, bent neck, petal abscission and leaf quality deterioration. In order to develop a protocol to treat spray roses, the combined application of FloraLife® Shield Ultra and FloraLife® EthylGuard Ultra (an STS based product) were studied.

Research:

Following treatment combinations were tested in this experiment:

Dipping	**Hydration**
No dipping	FloraLife® HydraFlor Clear Ultra 1 mL/L
FloraLife® Shield Ultra 1 mL/L + Agronex (surfactant) 1 ml/L	FloraLife® HydraFlor Clear Ultra 1 mL/L
No dipping	FloraLife® EthylGuard Ultra 0.5 mL/L + FloraLife® Hydrate Plus 1 mL/L
FloraLife® Shield Ultra 1 mL/L + Agronex (surfactant) 1 ml/L	FloraLife® EthylGuard Ultra 0.5 mL/L + FloraLife® Hydrate Plus 1 mL/L

Spray roses cv. Scarlette Mimi (red), Pink Majolica, White Majolica and Yellow Babe were used for this experiment. A bouquet with 4 stems of each rose variety was used. Each vase contained 16 stems. Each treatment was carried out using 3 replicates.

Flowers were harvested from a local farm in the Savanah of Bogotá (Colombia), and immediately transported to the FloraLife flower testing room located in Funza (Colombia). Then flowers were divided into groups and the dipping was made according to the table above. The flower heads of roses were completely immersed inside the dip solution for optimum coverage. Then, the cut ends of the flowers were placed in buckets filled with 4L of the hydration solution described in the table above for hydration. The hydration process was done for 12 hours. Then, flowers were packed separately per treatment in individual boxes, each treatment in a different box and stored for 7 days at 3°C to simulate farm storage and shipping. Flowers were unpacked and then each individual bouquet was placed in a vase previously filled with FloraLife® Express 300 solution (1 sachet/L). Vase life evaluation was carried out at room temperature and with 12 hours of daylight – 12 hours of darkness.

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Results:

Table 1. Average of vase life (days) of spray roses

Treatments		Vase life (days)				
Dipping	**Hydration**	**Scarlette Mimi (red)**	**Pink Majolica**	**White Majolica**	**Yellow babe**	**Average**
No dipping	FloraLife® HydraFlor Clear Ultra	7.0	9.3	8.9	10.6	9.0
FloraLife® Shield Ultra	FloraLife® HydraFlor Clear Ultra	11.8	12.0	11.1	12.0	11.7
No dipping	FloraLife® EthylGuard Ultra + FloraLife® Hydrate Plus	8.9	12.4	12.6	12.8	11.7
FloraLife® Shield Ultra	FloraLife® EthylGuard Ultra + FloraLife® Hydrate Plus	12.8	13.8	13.8	14.2	13.6

Conclusions:

The data indicates that the spray roses tested in this experiment are ethylene-sensitive as the STS treatment improved the vase life. Also, treating the spray roses with FloraLife® Shield Ultra improved the vase life. And finally, the combination of the 2 products resulted in the best vase life performance.

Photos:

1. FloraLife® HydraFlor Clear Ultra and no dipping

D7

D14

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2. FloraLife® HydraFlor Clear Ultra and FloarLife® Shield Ultra

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3. FloraLife® EthylGuard Ultra + FloraLife® Hydrate Plus and no dipping

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4. FloraLife® EthylGuard Ultra + FloraLife® Hydrate Plus and FloraLife® Shield Ultra

D7

D14