

Erin Lisk
Postharvest & Technical Support Scientist - FloraLife

Introduction:

Botrytis cinerea, also known as grey mold, infects a wide variety of flowers. Some flowers are more prone to botrytis infection than others. Roses are especially sensitive to it and the infection can spread very fast. Practically all roses contain some botrytis spores before being shipped from the farms. These spores will develop further when roses encounter some type of stress, such as damaged tissue. FloraLife engineered a solution that helps stop the spores developing into infection. In this research update we share the results of an experiment that looked at the effects of FloraLife® BotrytisBloc Bundle compared to control.

Research:

Roses were sourced from a Farm in Kenya, and the experiment was performed in the FloraLife Kenya lab. The rose heads were then dipped in a solution containing the FloraLife® BotrytisBloc Bundle, while the control treatment was not dipped. The stems were re-cut to about 40 cm in length, with the lower leaves removed. Stems were then placed in a 1 liter bucket filled with FloraLife® Express Rose 300 solution and placed into a sealed bucket for 48 hours to create a high humidity environment that would accelerate Botrytis disease progression. Roses were then removed from the buckets and placed in vases on tables in the vase life observation room. Each treatment contained three replicate vases. The observation room had a temperature maintained at 18 °C with a 12 hour light and 12 hour darkness cycle. The flowers were observed daily for vase life changes.

Results:

Table 1. Average vase life and percentage of flowers terminated due to botrytis by day 7.

| Rose Variety | Vase life (days) | | % Flowers terminated due to Botrytis by day 7 | |
|----------------|------------------|--------------------------------|---|--------------------------------|
| | Control | FloraLife® BotrytisBloc Bundle | Control | FloraLife® BotrytisBloc Bundle |
| Athena | 6.2 | 9 | 66.8 | 0 |
| Fuchsiana | 9.7 | 11.6 | 33.3 | 0 |
| Moonwalk | 7.6 | 10.3 | 41.7 | 0 |
| Average | 7.8 | 10.3 | 47.3 | 0.0 |



Chart 1. Average vase life of all flowers.

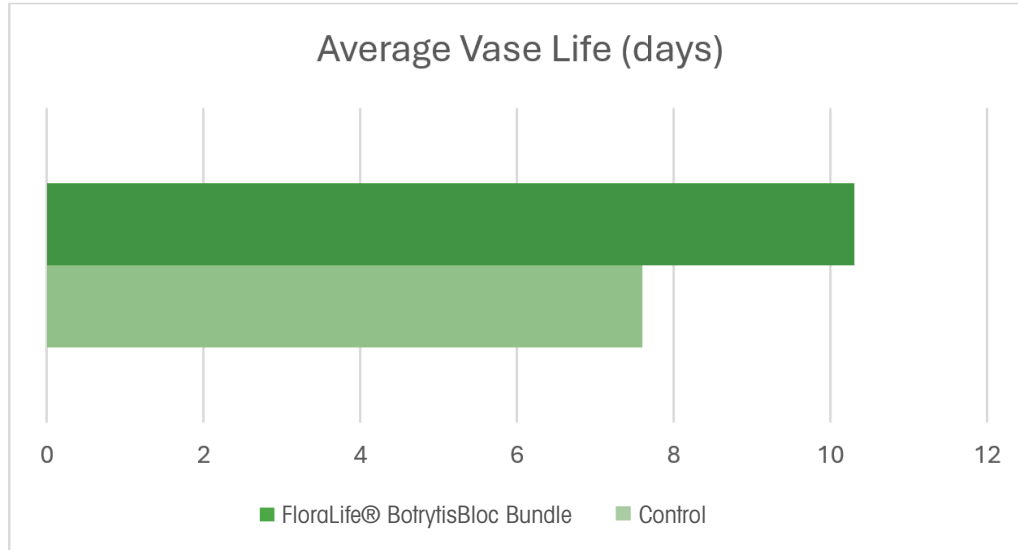
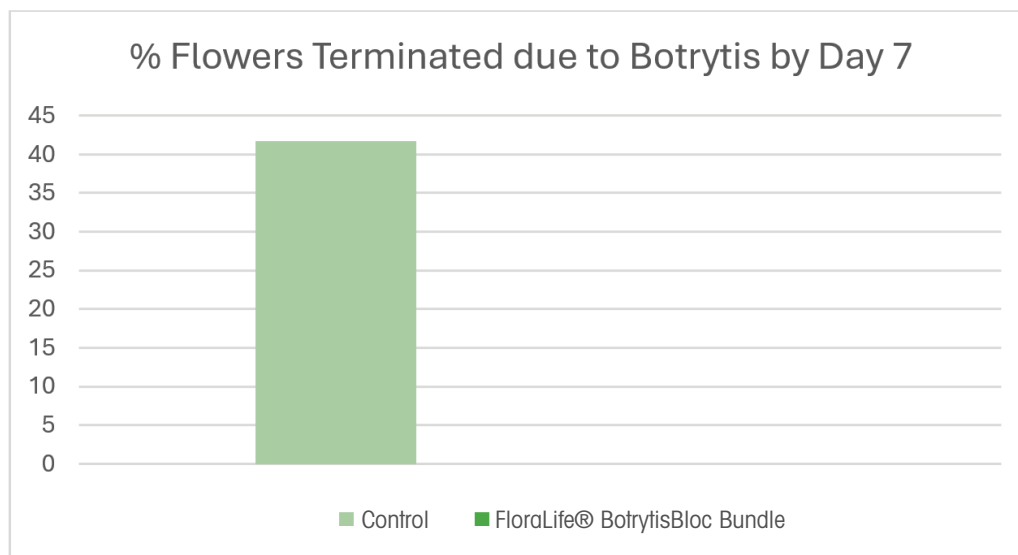


Chart 2. Average percentage of flowers terminated due to botrytis by Day 7.





Photos from Vase Life Day 7:

Control (No Dip):



FloraLife® BotrytisBloc Bundle:



Conclusions:

Both vase life and the percentage of flowers terminated due to botrytis by day 7 improved when roses were treated with the FloraLife® BotrytisBloc Bundle compared to the control. Vase life increased by an average of 2.5 days and the percentage of flowers terminated due to botrytis decreased by 47% when using the FloraLife® BotrytisBloc Bundle.

*Please note that FloraLife® BotrytisBloc Bundle is currently only available in Kenya.