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Care and Handling of Tulips With Floralife® Tulipa 100

Introduction

Tulips are one of the most popular cut flowers. High season is from January until Easter, and despite the short season, they are usually found in the top 3 turnover of the Royal FloraHolland flower auction.

The production of tulips starts in the open field, where the bulb production takes place. During this phase, the grower tries to cause the bulb to produce multiple bulbs. After the harvest of those new bulbs and dry storage in big storage rooms, the grower simulates winter by lowering the temperature in the storage rooms for several weeks. This process prepares the bulbs to start developing foliage and flowers as soon as they are brought into a warmer environment, where they find sufficient water and nutrients. Tulip cut flower production usually takes place indoors, in a greenhouse. It is possible to harvest cut tulip stems 3 to 4 weeks after placing the bulbs in the greenhouse.

Tulips have early, mid, and late season varieties due to their genetic properties, meaning that certain varieties are only available early in the season, others only during mid-season, and others only in late season. Usually, it is for this reason that you will not be able to get the same variety throughout the season.

Cut tulips need care and handling. By water uptake at low temperatures, they can become very turgid, at which point the tulips become vulnerable to mechanical damage (a stem or leaf would easily break). Sleeves and paper wraps provide protection and are therefore commonly applied by growers. It is a good practice to not overload the buckets.

Tulips can resist a dry period, especially if they are kept at low temperatures. It is still prescribed by the flower auction in Holland to deliver buckets of tulips to the auction without solutions, as it is believed that solutions will promote stem elongation.

Stem elongation is typical for tulips. As a genetic property, each variety will show a different level of elongation. Low temperatures inhibit development, so little stem elongation is caused. Once the flowers are moved into the store, stems begin to elongate rapidly. Once flower heads start to grow above the sleeve, they are often perceived as old, and then turned into waste. Another negative aspect of elongation is that the stems will often bend.

A typical aspect for tulips is the tendency to develop yellow leaves over time. This is also genetically determined, so there are some varieties that never show yellowing and others that show very severe yellowing. Once the stem is cut from the bulb, the stem gets into an imbalance, as it no longer receives certain properties from the bulb. One observable sign of this process is leaf yellowing.

Further, vase life can be short. Tulips typically don't last very long.

Photos on Day 6



Control



Floralife® Tulipa 100

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Objective

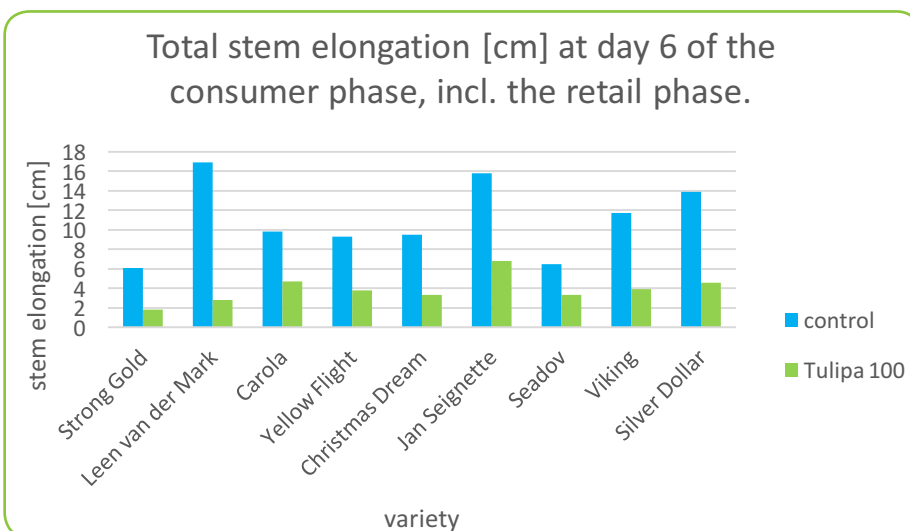
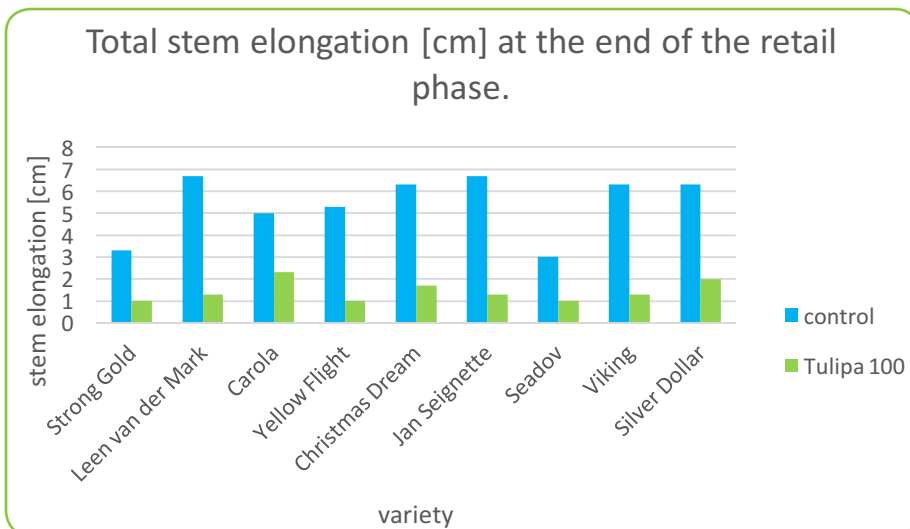
Stem elongation, leaf yellowing and vase life all can be influenced by applying a certain postharvest treatment called Floralife® Tulipa 100. Tulipa 100 consists of two products: Floralife® Tulipa, which helps inhibit the stem elongation, and Floralife® Bulb 100, which helps enhance vase longevity, flower opening, flower size, and the color intensity of the flower.

Method

A treatment of 2.0 ml/L of Floralife® Bulb 100 and 0.06 ml/L of Floralife® Tulipa applied to cut tulips. The control group and the group treated with Floralife® Tulipa 100 were subjected to 24 hours at 2 °C, to simulate the transport phase, followed by another 48 hours at 20 °C, to simulate the retail phase. After that, all stems were recut in air and placed in vases with water alone, to simulate the consumer phase.

Results

Chart 1 and 2. Total Stem Elongation (cm)



RU December 2017 continued...

Chart 3. Leaf color: scored on a scale of 1 to 10, where a higher number represents more yellowing.

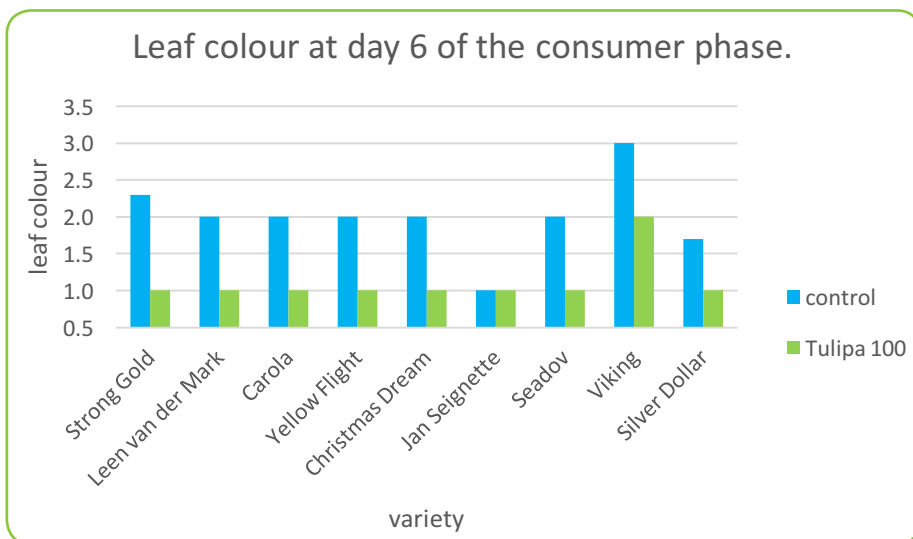
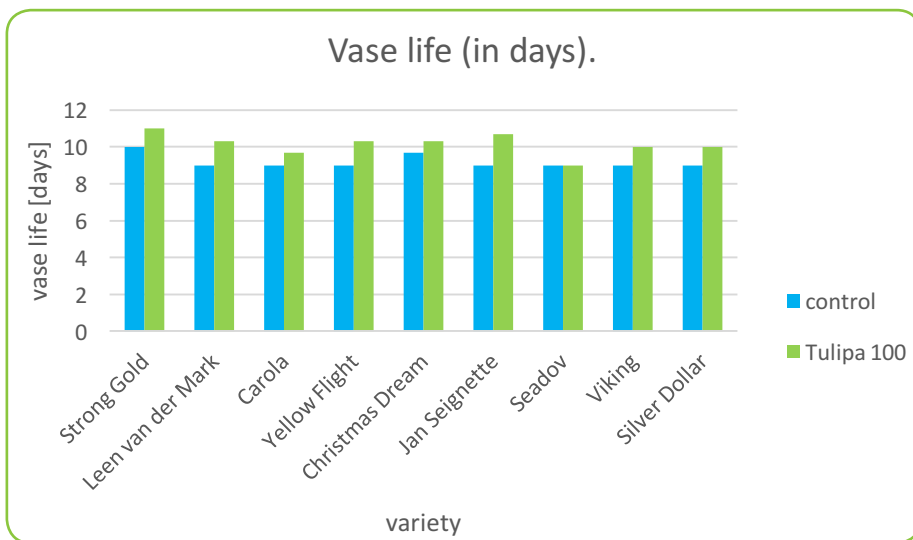


Chart 4. Vase life (in days)



Conclusion

It was observed that the tulips treated with Floralife® Tulipa 100 showed an increase in vase longevity. A significant reduction in stem elongation was observed in the tulips treated with Floralife® Tulipa 100. In addition, reduced leaf discoloration was observed in the treated tulips.

Note: Floralife® Tulipa 100 is authorized in The Netherlands. Ask your Dutch supplier for a treatment with Floralife® Tulipa 100 to help improve your tulips' quality.