

HydroFLOW Case Study

Long Stem Rose Growth

Installed: April 2018 Last Inspection: January 2019



Background

The Customer

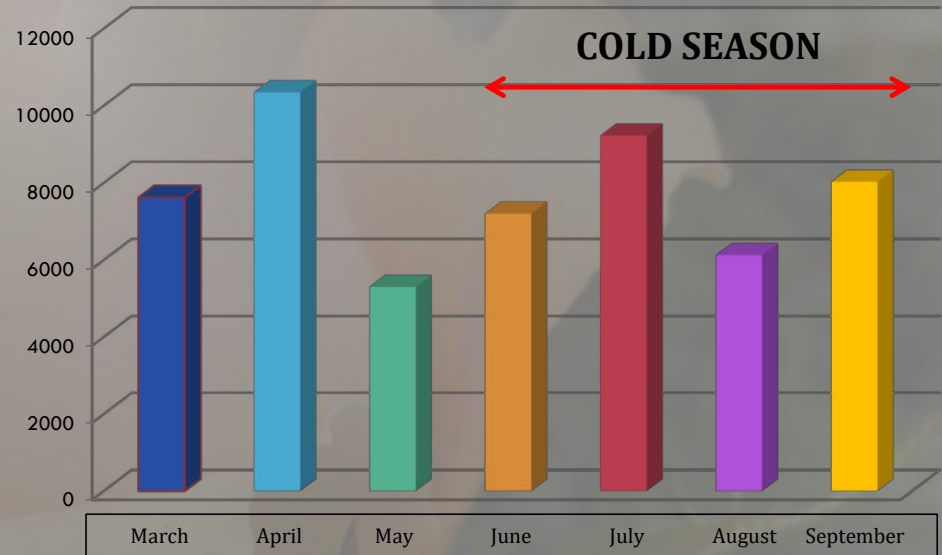
A long stem rose growing operation in South America.

The Customer's Problem

Long stem roses are priced by the length and quality of the stem. During the cold months overall growth slows, which reduces output from the greenhouses.

The grower chose to perform a *HydroFLOW* product evaluation to determine how the growth rate of the roses will improve throughout the year by tracking stem length and quality during different harvests.

Number of Roses per Month



HydroFLOW devices are also certified for use in organic agriculture by the Washington State Department of Agriculture.

Installed Equipment

A Custom *HydroFLOW* i12" unit was installed on the main irrigation line that fed the greenhouse.

Note: A larger unit than needed was used for testing purposes. The extra space between the unit and the pipe will not negatively impact results due to *HydroFLOW*'s unique signal induction technology.



HydroFLOW Custom i12" Unit

Parameters Evaluated

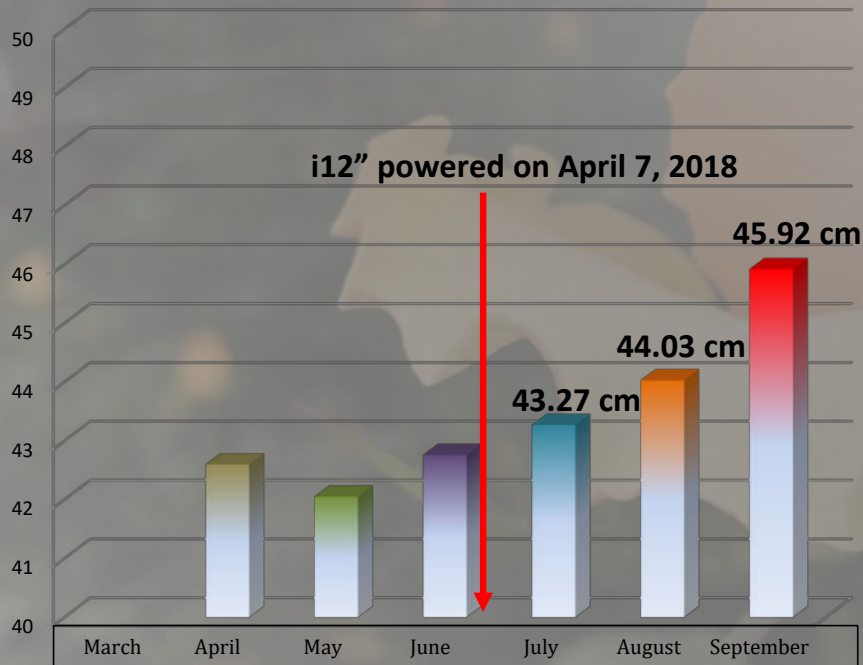
- Stem growth
- Strengthening of the stem
- Plant propagation



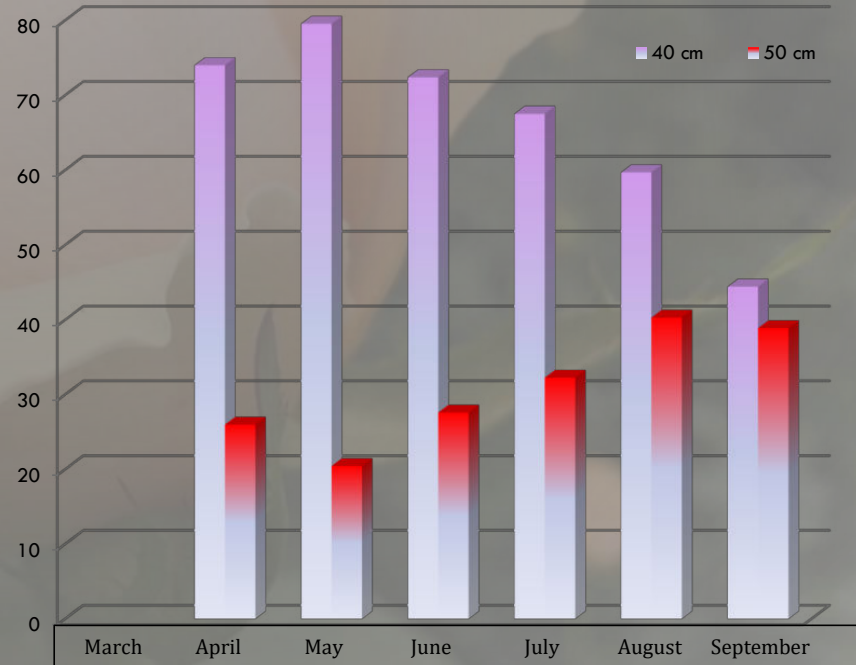
Results

Average growth when the evaluation began was 42.3 cm (16.65"). During the mid-cycle evaluation, average stem length began to increase and the ratio of 50 cm (19.69") to 40 cm (15.75") stem lengths improved towards the 50 cm stems.

Average Stem Length (cm)



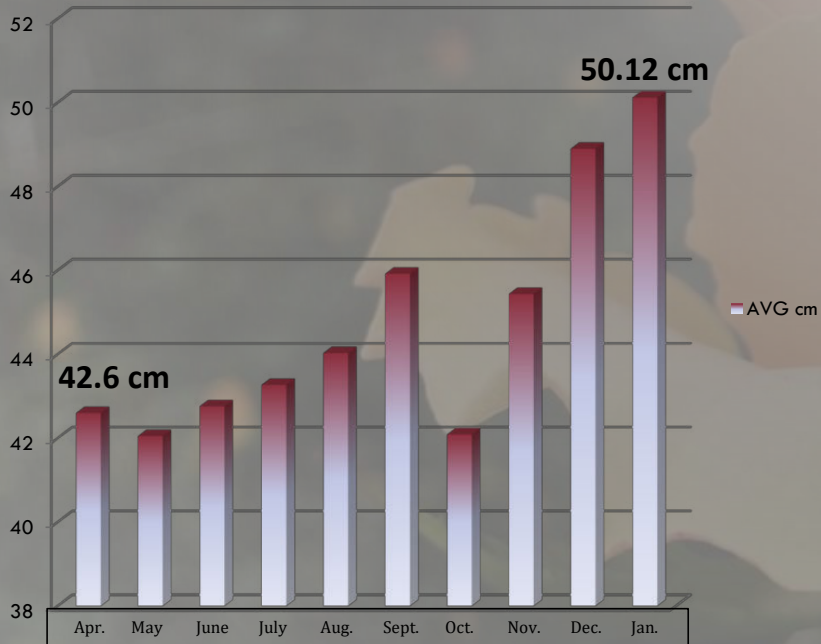
Ratio of 40cm to 50cm Stems



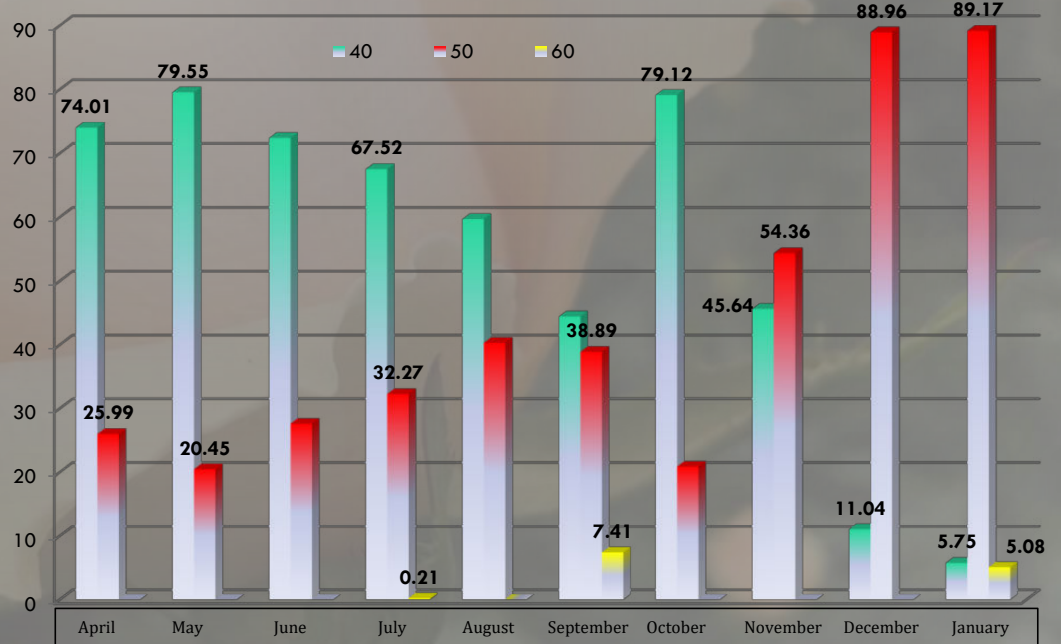
Results

During the end-cycle evaluation, average stem lengths increased to 50cm and the ratio of 50cm to 40cm stems was drastically improved. Rare 60cm stems began to emerge in September!

Average Stem Length (cm)



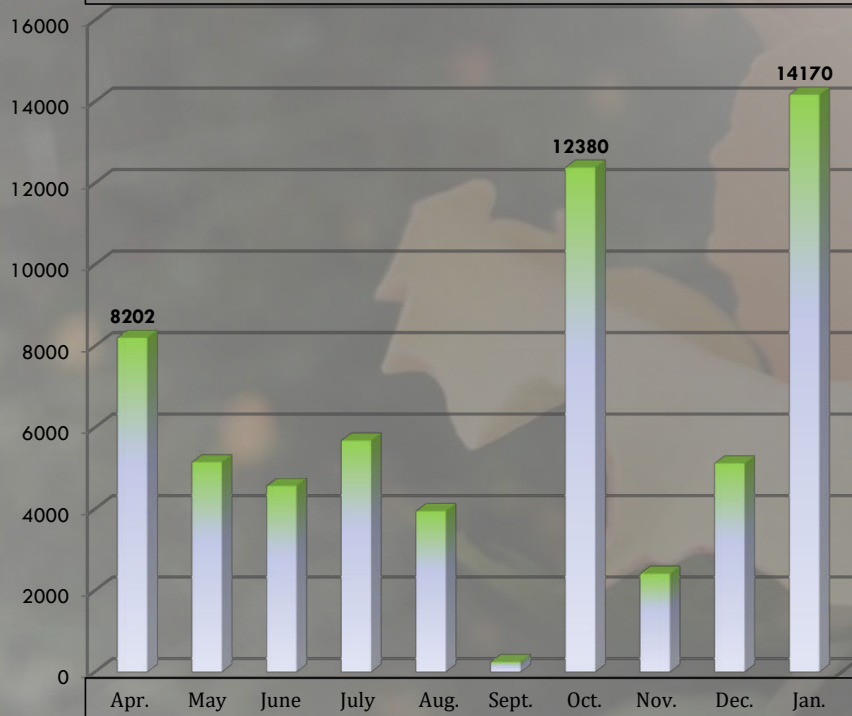
Ratio of 40cm to 50cm Stems



Results

By the end of the growing season average stem length increased and strengthened. Production levels were maintained through the cold months and the overall quality of flowers improved.

Number of Roses per Month



The customer also noted:

- Reduced scale and biofouling in the drip irrigation lines.
- Enhanced symmetry, color, and uniformity of the petals.
- Longer shelf life and better-quality flowers.
- Taller stems with increased thickness and improved leaf quality.

For more information, please contact:
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