

## Roses (Fresh Cut) - Season Extension to Alleviate Flower Shortage

### Introduction of Study

Demand for fresh cut roses in the U.S. is very seasonal, with Valentine's Day representing the largest number of sales for the year, followed by other higher demand times like Easter, Mother's Day, and Christmas.

To preserve the quality of delicate roses from farm to table, they are flown next day air after harvest to processing centers and quickly packed and distributed to retailers across the country. On average, it takes 10 days for a bouquet to travel from countries like Colombia to the retailer's shelf.

The temperate, high elevation climate of countries like Colombia, allows roses to grow year-round and supply retailers with inventory for each holiday. Though growers optimize flower production for the holidays, they still are not able to meet the higher demand for roses during those times due to the lack of fresh-cut blooms available for immediate distribution.

These growers face oversupply and negligible demand during months before and after the holidays. Rose stems are cut ("pinched") and usually discarded during these times to allow for new growth to supply the following higher demand periods. Even if there are buyers for the pinched flowers, the price per stem is not high enough to cover shipping and handling costs during those lower demand times.

By using RipeLocker, rose growers can store fresh cut roses for up to 6 weeks longer without loss of quality. This allows for growers to store surplus (pinched) inventory during low demand periods and increase available inventory for higher demand holidays to receive desired greater price margins.

### Objectives of the Study

To maximize potential harvest by storing roses for up to 6 weeks without loss of quality or decay. Utilizing RipeLocker, the client will be able to even out their supply curve and significantly increase their ROI annually.

### Research Methods & Instruments

Roses were stored in RipeLockers for 3-6 weeks in both Bogota, Colombia, and Miami. At the opening, there was no visible difference between RipeLocker and freshly harvested roses (Pic1 dotted vase is 6-week old roses stored on RipeLocker).

### Roses Stored in RipeLockers vs Control at 6 Weeks



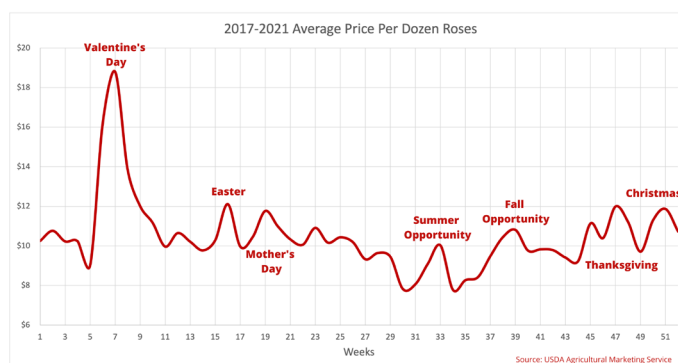
Pic1 - Red dotted vase (L) filled with 6 week old roses stored in RipeLocker compared to freshly harvested Control (R)

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## Economic Assessment

Rose prices in the US market are highly volatile, with Valentine's Day having the highest prices. By utilizing RipeLockers, rose growers can level out supply instability to take advantage of high price opportunities throughout the year, especially during Valentine's Day. USDA data reveals that retailers' average price per dozen roses fluctuates during the year in 7 different market opportunities. These averages synchronize supply with high price demand cycles throughout the year.

### 2017-2021 Average Price/Dozen Roses by Opportunity



Pic2

Assuming one RipeLocker can store approximately 2,400 rose stems, there is an added value per container based on the price difference between roses going in and coming out of the RipeLocker at any given market opportunity. Based on the USDA retail price information, rose price differences for these market opportunities vary from \$0.16/stem on Mother's Day to \$0.72/stem leading up to Valentine's Day. These prices are retail averages with higher quality blooms (i.e., longer stem roses) that can get higher market prices.

### Pricing Opportunities by Season

Opportunity (Week #)	Price Going In	Price Going Out	Price Difference	RipeLocker Added Value
Valentine's Day (3-7)	\$0.84	\$1.56	\$0.72	\$1,728.00
Easter (14-16)	\$0.83	\$1.01	\$0.18	\$432.00
Mother's Day (17-19)	\$0.85	\$1.01	\$0.16	\$384.00
Summer Opportunity (30-33)	\$0.63	\$0.85	\$0.22	\$528.00
Fall Opportunity (35-39)	\$0.67	\$0.91	\$0.24	\$576.00
Thanksgiving (44-47)	\$0.77	\$0.97	\$0.20	\$480.00
Christmas (49-51)	\$0.82	\$1.02	\$0.20	\$480.00
<b>Total RipeLocker Added Value</b>				<b>\$4,608.00</b>

Pic3

## Conclusions and Implications

- RipeLocker has proven to be an effective technology to save fresh cut roses usually discarded during low demand, high supply periods for up to 6 weeks.
- Growers can solve flower shortage problems and receive added value pricing during peak market opportunities with the roses preserved in the RipeLockers during the slow demand periods.
- A single RipeLocker can yield \$4,608/year in added value. Deploying a minimum order of 40 RipeLockers can increase the grower's annual return by \$184,320.



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Their goal is to consistently provide a superior experience to partners and customers through quality products, logistics solutions, value-added services, and ample product availability.

With 37 production farms, they are able to produce over 1 billion quality stems per year on 1,700 acres of state-of-the-art greenhouses.

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