

## Reducing processing cost with DeltaMax through cycle time reduction



**CUSTOMER NEED :** A horticultural container manufacturer is attempting to increase throughput and reduce processing costs of their 2.65 gallon flower pots.

### CURRENT SITUATION

When attempting to increase the throughput of current equipment and materials, parts become defective. Commercially available higher melt flow resins often produce brittle parts that break easily. Conversely, lower melt flow resins may lead to product defects, such as short shots and inconsistent parts.

Manufacturer remains firm on the importance of high impact properties in their polypropylene resin and therefore sources a less desired, lower melt flow resin in order to meet physical properties. This in turns limits the overall ability to increase manufacturing speeds.



Increasing processing speed of current low melt flow PP resin results in a short shot.

### RESULTS

Using DeltaMax m100 Melt Flow Modifier at 0.5% loading, allowed our customer to reduce processing temperatures by 14%, resulting in shorter cooling times and a cycle time reduction of 13%. Throughput improvements of 415,000 pots results in \$275,000 of additional revenue with significant margin improvement.



**13%**  
reduction  
in cycle  
time



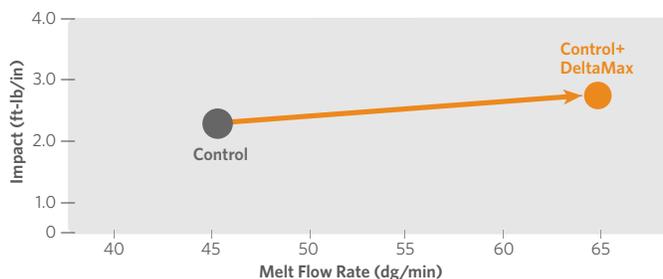
**415k**  
additional  
parts  
per year



**\$275k**  
additional  
revenue  
per year

### MILLIKEN SOLUTION

DeltaMax m100 Melt Flow Modifier allows converters to boost melt flow and impact of impact copolymer PP in injection molding applications.



**IMPACT FROM**  
**2.2 to 2.5**  
(ft-lb/in)\*at 73°F  
**14%**  
IMPROVEMENT

**MFR FROM**  
**45 to 65**  
(dg/min)  
**45%**  
IMPROVEMENT

PLEASE NOTE: As each customer's use of our product may be different, information we provide, including without limitation, recommendations, test results, samples, care/labeling/processing instructions or marketing advice, is provided in good faith but without warranty and without accepting any responsibility/liability. Each customer must test and be responsible for its own specific use, further processing, labeling, marketing, etc. All sales are exclusively subject to our standard terms of sale posted at [www.milliken.com/terms](http://www.milliken.com/terms) (all additional/different terms are rejected) unless explicitly agreed otherwise in a signed writing.

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