



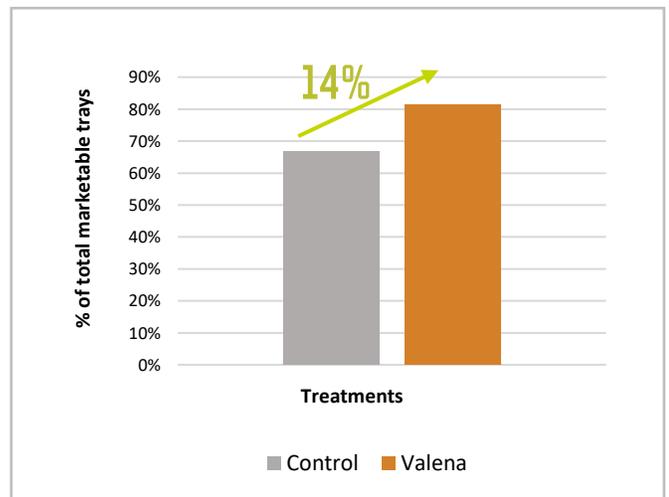
# Valena™

## FERTILIZER

# HIGHER SALEABLE ROSE LINER PRODUCTION WITH VALENA™

## BENEFITS OF VALENA

- Valena is a novel fertilizer technology that helps commercial rose growers increase their total available, saleable rooted liner production and help them remain competitive in the ornamental market.
- Valena, when added early in the soil at propagation time, increases the on-time availability of the rooted liners, while reducing the total loss, after three-month production.
- Increasing the liners readiness, while reducing their loss can help growers get more space available at a predictable time for additional greenhouse production and ultimately increase their total dollars per acre of commercial greenhouse.

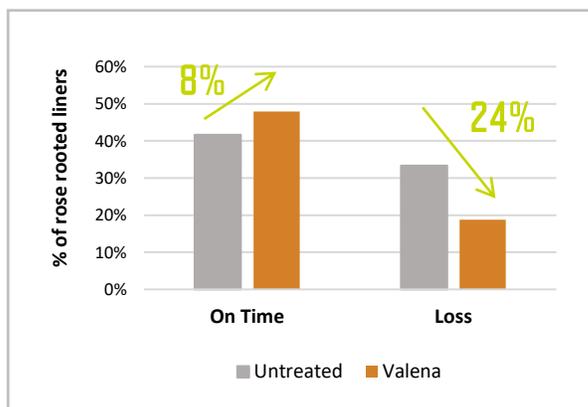


VALENA APPLIED AT 3.0 G/L OF SOIL DEMONSTRATED A 14% INCREASE IN THE TOTAL USABLE AMOUNT OF ROSE LINERS AT PRE-SHIPING FIXING STAGE!

## VALENA™ HAS A POSITIVE IMPACT ON KNOCK OUT® ROSE PRODUCTION



**THIRD PARTY COMMERCIAL GREENHOUSE TRIAL** - Crop: Knock Out® Rose (var: Sunny) from a leading Washington ornamental greenhouse grower. **Goal:** To demonstrate the impact of Valena on the overall increase in rose liners. **Growing Practice:** Standard. Rose cuttings were planted into a Landmark 72 cell propagation tray using a standard peat-based media with a composition of 60% peat and 40% perlite. **Treatments:** Untreated grower standard (negative control) or treated with Valena 3 grams/liter soil volume (2.4 kg/cu. yd.). Valena was incorporated and mixed in the soil system and filled with the tray filling equipment used by the greenhouse. **Number of flats (trays):** 200 trays per treatment. One cutting per cell. Valena treated trays were placed onto the same table. The untreated trays were placed onto an adjacent table. **Duration:** Twelve weeks. **Data collection:** Final visual grading evaluation. Total marketable trays determined at pre-shipping selection.



VALENA APPLIED AT 3.0 G/L OF SOIL DEMONSTRATED 1) AN 8% INCREASE IN ON-TIME AVAILABILITY (SCHEDULE) AND 2) A 24% REDUCTION OF UNSALABLE LINERS (TOTAL LOSS) OF THE PLANTS OVER THE CONTROL!

## INCREASE IN TOTAL REVENUE DOLLARS FOR GREENHOUSE PROPAGATED ROSE LINERS

Total increase in plants per table translated to income relative to market price of wholesale rose liners. Assumptions based on trial greenhouse standard trays per table of 48-72 cell rose liner trays per table and 500 tables per acre of greenhouse.

Treatment	Total plants per table	Increase in plants per table	\$0.56 per plant			\$0.83 per plant		
			Total income per table	Increase in income per table	Increase in income per acre (500) (table/acre)	Total income per table	Increase in income per table	Increase in income per acre (500) (table/acre)
Control	2,304	-	\$1,290	-	-	\$1,912	-	-
Valena 3.0 g/L	2,808	504	\$1,572	\$282	\$141,000	\$2,330	\$418	\$209,000

VALENA TREATED ROSES RETURNED GREATER THAN \$200,000 OF ADDITIONAL INCOME PER ACRE OF COMMERCIAL GREENHOUSE DURING THE PRODUCTION SEASON.

## ABOUT VALENA

- Dry granular fertilizer
- Derived from Kemin proprietary strain of whole dried cell *Euglena gracilis*, unicellular algae rich in paramylon (50%)
- Paramylon: Large carbohydrate storage molecule made up of linear chains of unique 1,3-β-glucan favorable for plant growth.

## GUARANTEED ANALYSIS

- Beta-glucan ≥50%
- Total Nitrogen (N) ≥2%
- Total Phosphorus (P<sub>2</sub>O<sub>5</sub>) ≥1%
- Total Potassium (K<sub>2</sub>O) ≥0.2%

## SMART MODE OF ACTION

Valena primes the soil by breaking down and releasing 1,3-β-glucan viewed as a Pathogen-Associated Molecular Patterns (PAMPs) by the plant's cells. Consequently, the plant elicits its defense responses and increases nutrient uptake to fight off potential pathogens. However, with no real threat, this leads to thriving plant growth.

## DIRECTIONS FOR USE

- **Sites:** Greenhouse propagation media
- **Recommended rates:**
  - 3 grams/liter soil volume (2.4 kg /cu.yd.)
- **Recommended application method:**
  - Soil incorporated, standard tray filling equipment
- **Recommended timing:**
  - One application/season
  - Early growing stage
  - At propagation.

Source: SD-20-22033; image shutterstock\_1567300954

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