

## CUTTING-EDGE NANOBUBBLE TECHNOLOGY SUSTAINABLY INCREASES VIOLET PRODUCTION



**Harster Greenhouses:** Harster operates an indoor, climate controlled, state of the art 15 acre greenhouse, with fully automated and regulated air temperature and flow, soil moisture, and shade controls with a 2,000 gallon irrigation tank.

**The Challenge:** Each crop of flowers at Harster needs very specific conditions therefore each section of the greenhouse has a different climate. Prior to installing Moleaer's nanobubble generator, the growth cycle was on average 7-8 weeks from Plugs.

**Our Solution:** Moleaer's Bloom 50 nanobubble generator provides a chemical-free, cost-efficient, sustainable solution to improve water quality by increasing dissolved oxygen (DO) levels in irrigation water supplies. The increased dissolved oxygen levels support root development and oxygenation, increasing nutrient uptake. It also has proven to reduce pathogens like Pythium and Phytophthora by as much as 90% and remove and prevent biofilms from surfaces.

**Results:** Since installing Moleaer's nanobubble generator, the team at Harster has reduced the crop growth cycle on its violets, achieving a consistent 6 week grow cycle, enabling increased production and profitability.

- Increased DO level in irrigation water to 21 PPM
- Achieved consistent 6 week growth cycle



**Bart Kouwenberg, Head Grower at Harster Greenhouses, said:**

*"Using a Moleaer nanobubble generator led to bigger plants and more root mass. Propagation was also sped up by 10 days and reduced the final weeks of flowering by 10 days."*