



The Chef's Garden Keeps Basil and Microgreens on Target in Winter With Sollum's Advanced Dynamic LED Lighting

10-15% winter average yield increase*

Introduction

In winter, basil does not forgive inconsistency. Microgreens don't either. For The Chef's Garden in Huron, Ohio, consistency is part of the brand promise and a key factor in customer loyalty as the company caters to quality-conscious stakeholders such as high-end restaurateurs.

This case study shows how advanced dynamic LED lighting improves the consistency and quality of basil through the winter months while improving overall production.

Results at a glance

- **10-15% average yield increase** during winter months
- **Higher quality and uniformity** of crops year-round
- **Consistent plant** height, structure and color
- Reduced basil downy mildew by **30-35%**
- **Reduced electrical consumption** thanks to the automation dimming feature on Sollum's SUNaaS® cloud platform

Project snapshot

- **Lit area:** 2.2 acres
- **Previous lighting:** HPS
- **Crops:** basil (including micro basil propagation) and microgreens
- **Target DLI used:** 12-15 mol/m²/day

The challenge

Winter light conditions can shift quickly. For basil and microgreens, that can impact uniformity, plant structure, and visual quality making production harder to keep predictable.

The Chef's Garden wanted greater control over their lighting to keep basil and microgreen production consistent throughout winter without having to implement additional operational workarounds.



*The grower reported results, compared to the previous HPS approach in the same greenhouse context. Results may vary by crop and facility.



Why Sollum

The Chef's Garden selected Sollum's advanced dynamic LED lighting solution to:

- **Increase yield**
- **Improve quality and consistency**
- **Reduce energy costs**
- **Gain flexibility** through spectrum and dimming controls

What they implemented

The grower reports using Sollum's solution to:

- **Enable automatic dimming** based on changes in natural light
- **Implement multiple spectral recipes**, as needed
- **Apply a custom light recipe** for micro basil propagation
- **Use the same fixtures** across microgreen production areas

Results observed

- **Winter yield improvement:** The Chef's Garden reported a 10-15% average yield increase during winter months.
- **Crop uniformity and appearance:** The company also reported that it had maintained higher quality and uniformity throughout the year and met crop requirements at all growth stages without having to relocate the plants.
- **Plant structure:**
 - Shorter internodes (more compact plants)
 - More intense pigmentation
 - Better plant architecture

- **Plant health:** In micro basil propagation, the grower reported that the custom recipe helped suppress outbreaks and estimated basil downy mildew decreased by 30–35%.
- **Energy control:** The team also reported that the dimming capability of SUNaaS reduced electrical consumption.

Grower's perspective

The Chef's Garden

"We have been working with Sollum for several years, and their programmable LED lighting has helped us increase yields by an average of 10–15% during the winter months, while also delivering higher quality and more uniform crops year-round."

"The ability to custom-tailor light spectrums gives us the flexibility to meet crop requirements at every growth stage without having to move plants."

– **Judit Ender, Head Grower, The Chef's Garden**



What this case shows

Lighting isn't about the fixture. It's about keeping crops on target when conditions change.

This case highlights how Sollum's advanced dynamic LED lighting with real-time adjustments and crop-specific light recipes can support measurable winter gains, reduce the outbreak of downy mildew and achieve stronger year-round consistency in basil and microgreens.

Want to see what advanced dynamic LED lighting can do for your crop? Talk to **Sollum's Customer Success team** about a lighting strategy built around your objectives, and the real conditions in every zone of your greenhouse.



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