



Harnessing Light to Advance Strawberry Production

54%* increase in yield



Introduction

During a trial conducted in a greenhouse in **Leamington, Ontario**, Sollum's agronomy team worked side-by-side with the grower to refine lighting recipes and strategies based on continuous crop observation.

This collaboration showed how our advanced dynamic LED grow light solution adapts to the needs of strawberries at different stages of growth, translating greenhouse observations into lighting actions.

Background

Strawberry production requires precise lighting conditions to support growth, fruit quality, and consistency.

The team used **Sollum's advanced dynamic LED solution** powered by SUNaaS®, and an **observation-driven** approach to connect what was seen on plants to **stage-specific** lighting strategies.

Trial objectives and setup

- Investigate the benefits of an **advanced dynamic LED lighting system** vs **static LED** for yield and quality improvement.
- Validate an **observation-to-action** workflow in a commercial environment.
- Maintain close collaboration between the grower and **Sollum's agronomy team** to ensure each change is grounded in crop response.

Strategic lighting adaptations

- **Interactive, real-time recipe fine-tuning** guided by crop observation.
- **Stage-specific** adjustments to support development as conditions evolve.
- Use of **advanced dynamic control** to adjust spectrum, intensity, and timing within normal operations.

Vigorous growth and sustained production

Over a **19-week** growth period, the crop maintained vigorous health consistent with high-level production under Sollum's solution. The sustained vitality underscores how dynamic lighting helps create consistent growing conditions.



*Compared with a static LED setup in the same commercial context.



Improved growth cycle with superior yields

The trial recorded significant yield gains: **on average, a 54% yield increase on class I fruits** and a **significant decrease in unmarketable fruit**.

These results were achieved in a **19-week** production year under Sollum fixtures, compared with **24 weeks** under another manufacturer's **static LED fixtures**.

This highlights how dynamic, stage-specific lighting can support a stronger cycle within a shorter production window.



The outcomes

- **Versatility proven:** dynamic, stage-specific lighting in commercial strawberries.
- **Observation-led decisions:** greenhouse signals converted into clear lighting actions.
- **Operational fit:** adjustments implemented within day-to-day workflows.
- **A practical playbook:** when to adjust recipes and how to evaluate results.

A leap forward for strawberry growers

This case shows how **advanced dynamic LED lighting**, powered by **SUNaaS®** and collaborative agronomy, brings real-time decision-making into daily operations. It is a practical path to adapting light to the crop, one observation and one adjustment at a time.

Want to learn more about how Sollum Technologies can support your cultivation goals? Visit sollum.tech or contact our **Customer Success team** today.



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