



Ariana Torres  
torres2@purdue.edu

Volume 10 Number 10 August 2025

## Making Financial Decisions with the HortCalculator: A Tool for Leafy Greens Growers

*Leafy greens growers face tough choices. Consumers want fresh, local produce, but pests, labor costs, and unpredictable markets make it hard to stay profitable. Deciding whether to invest in practices like biological control agents (BCAs) isn't always clear.*

To address these challenges, Dr. Ariana Torres at Purdue University developed the HortCalculator, an online tool that helps growers analyze production costs, revenues, and risks before making big investment decisions. Much like TurboTax, the HortCalculator walks users through simple questions about their farms and produces customized financial reports.



Photo Source: Stock Images Microsoft.

### What Is the HortCalculator?

The HortCalculator is an online decision-support tool designed for specialty crop growers, with its first module tailored for spinach grown in high tunnels. The tool guides growers through data entry on farm size, crop yields, sales channels, labor use, equipment, and costs. Once the data are entered, the tool generates **financial analyses**, including:

- **Cost breakdowns by category** (variable, labor, fixed, and overhead)
- **Profitability analysis** (gross revenue, costs, and net profit)
- **Sensitivity analysis** (how profits change with shifts in price or yield)
- **Break-even analysis** (the minimum price or yield needed to cover costs)

[www.e-gro.org](http://www.e-gro.org)

### 2025 Sponsors



Research  
Internships  
Scholarships  
Education

Funding the Future of Floriculture



P.L. LIGHT SYSTEMS  
THE LIGHTING KNOWLEDGE COMPANY

Reprint with permission from the author(s) of this e-GRO Alert.

By using the HortCalculator, farmers can:

- Track profits and expenses more accurately
- Plan investments strategically
- Evaluate the value of adopting sustainable practices like BCAs
- Compare different production systems side by side

## How the Tool Works

The HortCalculator organizes data into intuitive categories. Farmers input information in sections such as **Production, Sales, Labor, Equipment and Machinery, and Overhead Expenses.**

For growers considering the adoption of biological pest control, the tool also collects information on pest management costs and practices.

Each section is designed to reflect the actual conditions of the farm. For example:

- **Production data:** acreage, tunnel size, crop-specific yield, and harvest dates
- **Sales data:** percent sold in different channels (farmers' markets, restaurants, CSA, retail) and average price per pound
- **Labor data:** hours worked in pre-planting, growing season, and post-harvest activities
- **Equipment data:** purchase price, useful life, and maintenance costs of high tunnels, irrigation systems, and harvest tools
- **Overhead data:** utilities, insurance, marketing, and transportation costs
- The tool automatically calculates depreciation, allocates indirect costs fairly, and generates reports that can be saved or emailed for future use.

## Financial Reports for Decision-Making

### Cost Analysis

Cost analysis identifies how resources are being spent and highlights potential savings. The HortCalculator breaks costs into **variable, labor, fixed, and overhead**, showing their share of total expenses. Farmers receive results in tables and pie charts, making it easier to spot inefficiencies.

### Profitability Analysis

Profitability analysis calculates **gross revenue, total costs, and net profit.** This helps farmers see whether their current practices generate enough returns and compare alternative production systems. Visual bar charts make it easy to see the profitability of conventional vs. BCA production.

### Sensitivity Analysis

Farming is risky, and profits can shift with changes in yield or price. The sensitivity analysis tests “what-if” scenarios—such as lower yields from pests or higher prices due to market shortages. The tool simulates **49 possible yield-price combinations**, helping growers understand their risks and opportunities.

### Break-Even Analysis

Break-even analysis shows the minimum yield or price needed to cover all costs. For example, if costs increase while yields fall, the tool identifies the exact price needed per pound to avoid losses. These insights help farmers set realistic sales targets and negotiate contracts with buyers.



Photo Source: Stock Images Microsoft.

## Why This Matters

For leafy greens growers, financial planning is not optional—it's essential. Perishable products, pest outbreaks, and market fluctuations all threaten profitability. Tools like the HortCalculator simplify financial analysis, giving farmers reliable data to guide decisions about pricing, investments, and risk management.

Growers, researchers, and policymakers can use the HortCalculator to:

- Evaluate the financial viability of sustainable practices
- Support better farm management and long-term planning
- Strengthen risk management strategies for specialty crops

## Accessing the HortCalculator

The HortCalculator is free to use and available through Purdue University's Horticulture Business website:

<https://hortcalc.ceris.purdue.edu/>.

Farmers can log in, enter their farm and spinach data, and generate customized financial reports.

## Take-Home Message

Making production decisions is never easy, especially with perishable crops like spinach and other leafy greens. Costs can add up quickly, markets shift, and it's hard to know if new practices will pay off. The **HortCalculator** helps farmers cut through the uncertainty by turning farm records into clear financial reports. These reports show where money is being spent, how much profit is being made, and what risks might affect the bottom line. With this information, growers can test “what-if” scenarios, compare production methods, and set realistic goals for the season.

The value of the **HortCalculator** goes beyond individual farms. By using data to guide decisions, growers strengthen the long-term sustainability of their businesses and local food systems. The tool also supports the adoption of environmentally friendly practices, helping farms stay competitive while protecting natural resources. In short, the HortCalculator is more than a calculator—it is a decision-making partner that builds profitable farms, resilient communities, and a stronger specialty crop sector.



Photo Source: Stock Images Microsoft.

**e-GRO Alert**

[www.e-gro.org](http://www.e-gro.org)

**CONTRIBUTORS**

Dr. Nora Catlin  
Floriculture Specialist  
Cornell Cooperative Extension  
Suffolk County  
[nora.catlin@cornell.edu](mailto:nora.catlin@cornell.edu)

Dr. Chris Currey  
Assistant Professor of Floriculture  
Iowa State University  
[ccurrey@iastate.edu](mailto:ccurrey@iastate.edu)

Dr. Ryan Dickson  
Greenhouse Horticulture and  
Controlled Environment Agriculture  
University of Arkansas  
[ryand@uark.edu](mailto:ryand@uark.edu)

Dan Gilrein  
Entomology Specialist  
Cornell Cooperative Extension  
Suffolk County  
[dog1@cornell.edu](mailto:dog1@cornell.edu)

Dr. Chieri Kubota  
Controlled Environments Agriculture  
The Ohio State University  
[kubota.10@osu.edu](mailto:kubota.10@osu.edu)

Heidi Lindberg  
Floriculture Extension Educator  
Michigan State University  
[wollage@anr.msu.edu](mailto:wollage@anr.msu.edu)

Dr. Roberto Lopez  
Floriculture Extension & Research  
Michigan State University  
[rllopez@msu.edu](mailto:rllopez@msu.edu)

Dr. Neil Mattson  
Greenhouse Research & Extension  
Cornell University  
[neil.mattson@cornell.edu](mailto:neil.mattson@cornell.edu)

Dr. W. Garrett Owen  
Sustainable Greenhouse & Nursery  
Systems Extension & Research  
The Ohio State University  
[owen.367@osu.edu](mailto:owen.367@osu.edu)

Dr. Rosa E. Raudales  
Greenhouse Extension Specialist  
University of Connecticut  
[rosa.raudales@uconn.edu](mailto:rosa.raudales@uconn.edu)

Dr. Alicia Rihn  
Agricultural & Resource Economics  
University of Tennessee-Knoxville  
[arihn@utk.edu](mailto:arihn@utk.edu)

Dr. Debalina Saha  
Horticulture Weed Science  
Michigan State University  
[sahadeb2@msu.edu](mailto:sahadeb2@msu.edu)

Dr. Beth Scheckelhoff  
Extension Educator - Greenhouse Systems  
The Ohio State University  
[scheckelhoff.11@osu.edu](mailto:scheckelhoff.11@osu.edu)

Dr. Ariana Torres-Bravo  
Horticulture/ Ag. Economics  
Purdue University  
[torres2@purdue.edu](mailto:torres2@purdue.edu)

Dr. Brian Whipker  
Floriculture Extension & Research  
NC State University  
[bwhipker@ncsu.edu](mailto:bwhipker@ncsu.edu)

Dr. Jean Williams-Woodward  
Extension Plant Pathologist  
University of Wyoming  
[jwilwood@uwyo.edu](mailto:jwilwood@uwyo.edu)

Copyright ©2025

Where trade names, proprietary products, or specific equipment are listed, no discrimination is intended and no endorsement, guarantee or warranty is implied by the authors, universities or associations.

**Cooperating Universities**

**Cornell CALS**  
College of Agriculture and Life Sciences

**Cornell Cooperative Extension  
Suffolk County**

**UTIA INSTITUTE OF  
AGRICULTURE**  
THE UNIVERSITY OF TENNESSEE

**IOWA STATE UNIVERSITY**

**UNIVERSITY  
OF WYOMING**

**UCONN**

**UofA DIVISION OF AGRICULTURE  
RESEARCH & EXTENSION**  
University of Arkansas System

**MICHIGAN STATE  
UNIVERSITY**

**NC STATE  
UNIVERSITY**

**P PURDUE  
UNIVERSITY**



**THE OHIO STATE  
UNIVERSITY**

**In cooperation with our local and state greenhouse organizations**

**MAUMEE VALLEY GROWERS**  
Choose the Very Best.



Metro Detroit Flower Growers Association



**Indiana  
FLOWER  
GROWERS  
Association**

