

MICROGREENS WEEKLY DIGEST

Nutrition | Science | News

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WHAT YOU MISSED THIS WEEK

Big week for microgreens science and business. Turns out chia microgreens are way more complex than anyone thought. Light exposure changes everything at the molecular level. We're talking massive biochemical shifts that boost nutrition by nearly 900%.

Meanwhile, real people are building real businesses. Katie Frank converted her sons' Xbox room into a thriving operation that's approaching three years of growth. She's selling at multiple farmers markets and developing green powder to solve the shelf life problem.

Anne Dunaway learned an expensive \$8,600 lesson about timing and permits, but her community rallied hard. Food desert markets desperately need what growers can provide.

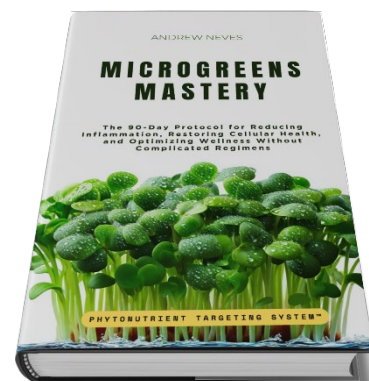
And here's something wild—your morning handful of microgreens might outperform \$200 hair treatments. Dr. Greger's latest research shows specific plant compounds increase hair counts by 40%. Broccoli and radish microgreens contain exactly what the studies used.

Commercial growers, take note: universities are now training your future competition with structured certificate programs.

THE HIGHLIGHTS

- Sunswell Greens conquers major Florida retail partnerships
- Canadian trade tensions create local growing opportunities
- Microgreens vs microherbs: know the health differences
- Ancient Mayan warriors carried chia for strength research shows

MICROGREENS MASTERY



This microgreens guide teaches optimal variety selection for maximum nutrition. Science-based system targets wellness goals. Limited copies, November release.

[Pre-Order Now](#)

NUTRITION SCIENCE

The Hidden Science Behind Chia Microgreens: What Seven Studies Reveal

Seven recent research papers reveal chia microgreens as far more complex than tiny plants sitting on grocery store shelves. These miniature versions of *Salvia hispanica* pack concentrated nutrition that shifts dramatically based on growing conditions, light exposure, and post-harvest handling.

The Nutritional Transformation

Chia microgreens contain 0.88 ± 0.005 mg/100g quercetin—the highest among tested varieties, beating sunflower microgreens at 0.58 ± 0.003 mg/100g.¹ Quercetin acts as a powerful antioxidant that helps reduce inflammation and may support heart health and immune function.

Chia microgreen powder contains 34.7% protein with an amino acid score of 80, meeting 80% of FAO reference values for human nutrition.² That protein quality rivals many animal sources. Leucine reaches 1900 mg/100g—critical for muscle protein synthesis. Lysine hits 1400 mg/100g, often the limiting amino acid in plant proteins.

Sprouting dramatically increases bioactive compounds that matter for daily health. Vitamin C jumps from 1.60 mg/g in seeds to 14.2 mg/g in sprouts—nearly nine times higher. Caffeic acid content explodes from 0.28 mg/g to 12.54 mg/g during sprouting.⁶ Caffeic acid helps protect cells from oxidative damage and may support brain health.

Light Changes Everything

Croatian researchers found light exposure dramatically transforms chia microgreens at the molecular level.³ Dark-grown plants contain negligible carotenoids, but 24-48 hours of light triggers massive biochemical shifts. Neoxanthin jumps from undetectable to 170 μ g/g dry weight. Violaxanthin reaches 150 μ g/g. These carotenoids support eye health and act as antioxidants throughout the body.

The practical takeaway: vibrant green microgreens sitting under grow lights pack more nutrition than pale counterparts. Light intensity of 100 μ mol photons $m^{-2}s^{-1}$ provides optimal results.



Shelf Life Reality

Fresh chia microgreens deteriorate quickly after harvest, affecting both nutrition and food safety. Mexican researchers tested sanitizing treatments to extend shelf life.⁴ Colloidal silver achieved 1.78 days at 10% rejection rates. Sodium hypochlorite managed 1.63 days. Untreated controls lasted only 1.42 days.

Those short timeframes explain why fresh microgreens cost so much and spoil fast in home refrigerators. The message for consumers: buy fresh microgreens close to harvest and use them quickly.

Growing Medium Innovation

Coffee waste works as growing substrate, which matters for both sustainability and cost. Industrial instant coffee residue mixed with sand and sawdust allows chia microgreens to thrive.⁵ Research also shows coconut coir mixed with sand and rice husk ash works effectively, with optimal results when seeds are soaked in warm water before sowing.⁷

Food Application Potential

Incorporating 7% chia microgreen powder into wheat noodles enhances nutrition while maintaining acceptable texture.² The addition boosts protein content and adds antioxidants to otherwise starchy foods. Cooking time decreases from 18 to 12 minutes with 5% microgreen powder—a practical benefit for busy cooks.

Research Gaps

Despite these advances, significant gaps remain in chia microgreen research. The seven studies focus on different aspects but lack comprehensive integration. No research compares nutritional outcomes across different growing conditions or examines how processing methods affect bioactive compound retention.

The Bottom Line

Chia microgreens are dynamic biological systems. Light exposure timing, harvest methods, storage conditions, and processing techniques all influence final nutritional outcomes. The data consistently shows sprouting increases beneficial compounds, but optimization requires careful attention to environmental factors.

Sources:

1. Adhikari, et al. "Comparative Study of Quercetin Content in Seeds and Microgreens." Indian Journal of Pharmaceutical Education and Research 59, no. 1 (2025): S225-S228.

2. John, Sandesh, et al. "Unlocking the Potential of Chia Microgreens: Physicochemical Properties, Nutritional Profile and Its Application in Noodle Production." Food & Bioprocess Technology 18 (2025): 5605-5620.

3. Mlinarić, Selma, et al. "The Effect of Light on Antioxidant Properties and Metabolic Profile of Chia Microgreens." Applied Sciences 10, no.17 (2020): 5731.

4. Piña-Moreno, Erika, et al. "Effect of Sanitizers on the Sensory Shelf-Life of Chia (Salvia hispanica L.) Microgreens." Agro Productividad 18, no. 1 (2025): 189-194.

5. Piña-Moreno, Erika, et al. "Optimized Substrate Formulation Using Industrial Instant Coffee Residue for Growing Amaranth and Chia Microgreens." Agrociencia 59, no. 5 (2025): 1-15.

6. Motyka, Sara, Halina Ekiert, and Agnieszka Szopa. "Chia Sprouts and Microgreens as a New Nutraceutical Raw Materials and Their Health-Promoting Impact in Modern Diets." Current Issues in Pharmacy and Medical Sciences 36, no.1 (2023): 33-44.

7. Junpatiw, Anjana, and Akarapon Sangpituk. "Effects of Seed Preparation, Sowing Media, Seed Sowing Rate and Harvesting Period on the Production of Chia Microgreens." International Journal of GEOMATE 17, no. 61 (2019): 80-85.

NUTRITION
MULTIPLIED

Microgreens Vs Microherbs:
Understanding the Basics

Microgreens and microherbs aren't identical. These differences affect your health.

Microgreens come from vegetables and herbs harvested at 1-3 inches. They pack 40 times more vitamins A, C, E, and K than mature plants. Use them in salads and smoothies for nutrition.

Microherbs come exclusively from herbs *harvested at 2-4 inches*. They focus on essential oils and therapeutic compounds. Basil delivers anti-inflammatory properties. Cilantro supports detoxification. Add them to sauces and dressings for benefits.

Most people treat them identically. Wrong choice means missing health benefits.

Choose microgreens for vitamin density. Choose microherbs for therapeutic compounds. Your body needs both.

WELCOME NEW MEMBERS

NAME	CITY	COUNTRY
Amada Afel	Sydney	Australia
Alessandro Lemotta	Vitória da Conquista	Brazil
Barbara Aurini		Canada
Kathleen		England
Abinesh Abi	Bengaluru	India
Kiran Deshmukh	Pune	India
Keboletse Lelekanye	Nairobi	Kenya
John Brush	Seattle	USA
Anup Aishu	South Holland	USA
Debra Ahav	Fairfax	USA
Terry Morris	Lancaster	USA
Lori Bowen	Guntersville	USA
Cyndie Ong	Cypress	USA
Jon	South Holland	USA
Kathleen Carter		
Dima Repin		
Dayna Goldfields		
Vaidyas		
Praveen Vanahalli		
Justin and Shandy		
McDonald		
Adrian Jagmohan		
Val Vogel		
Ravinder Nagpal		



**MICROGREENS
WORLD**
NUTRITION | SCIENCE | BUSINESS

COMMUNITY CORNER



Former Nurse Grows Prevention, Not Pills

Katie Frank spent twenty years watching people get sick. Emergency rooms, trauma centers, endless prescriptions—the same cycle repeating.

After two decades in clinical care, she made a radical shift. Frank converted her sons' Xbox room into something unexpected: a microgreens farm.

[Coastal Greens Farm](#) proves you don't need acres to grow a business. Frank's 10x10 room produces arugula, radish, basil, sunflower shoots, and thirteen other varieties. Harvest happens every 10-21 days using LED lights and vertical racks. No soil degradation. No weather worries.

The numbers tell the story. Frank's operation is approaching three years of consistent growth. She's expanded beyond microgreens to free-range eggs and Okinawa sweet potatoes.

Multiple farmers markets now carry her products—Wrightsville Beach, Hampstead, Tidal Creek, plus retail locations like Lovey's Market.

Smart commercial growers are taking notice. Frank's developing green powder to extend shelf life, solving the travel problem that limits fresh microgreen sales. Chefs appreciate consistent quality and year-round availability.

Frank's husband Jaime—formerly a "city boy"—now handles market sales. Their business model works because microgreens pack serious nutrition density. Vitamins C, E, K, plus antioxidants and minerals in every tiny leaf.

The former nurse puts it simply: "I don't want to teach you about medications anymore. I want to help you not need them." That's preventive health you can grow at home.

Source: Klahre, Beth A. "Green Thumb: Katie Frank peddles prevention with microgreens." **Wilma Magazine**, September 10, 2025. <https://www.wilmamag.com/green-thumb>



Food Desert Markets Want Your Microgreens

Anne Dunaway learned an expensive lesson about timing. Her [Urban Prairie Agriculture](#) lost \$8,600 per week in contracts because Ogden City's permitting process dragged on longer than expected. What should have been a May 2024 opening didn't happen until September.

But here's what caught attention: the community support was overwhelming.

Carla Trentelman, a retired Weber State sociology professor, met Dunaway at farmers markets and immediately saw the potential. "Annie's focus has been two-fold: helping local farmers find places to sell and creating better food access for people," Trentelman said. She called it a "win-win."

Ogden City Councilwoman Angela Choberka, who manages equity initiatives with Intermountain Healthcare, has witnessed how poor food access impacts health. Former Rep. Rosemary Lesser joined Eden Streets' board alongside Dunaway specifically to eliminate food deserts.

Stephanie Howerton from Local Artisan Collective watched Dunaway grow from "just microgreens to a whole store." Howerton adds microgreens to everything—sandwiches, eggs, you name it.

The numbers prove the opportunity. Food deserts exist where 30 percent of residents live in poverty, half a mile from grocery stores. Dunaway's 301 28th Street location serves exactly this population.

By January 2025, her indoor hydroponic farm was producing microgreens, tomatoes, herbs, and lettuce. The facility has 10 times more growing capacity.

Commercial growers, take note. These markets desperately need fresh food sources. Community leaders are ready to support you. The demand exists. Learn from Dunaway's delays, but don't let bureaucracy stop you from serving people who need nutrition.

Source: "Fresh Local Food in Ogden: Urban Prairie Agriculture Fights Food Deserts." **Utah Stories**, September 2025. <https://utahstories.com/2025/09/urban-prairie-agriculture-ogden-food-desert/>



How Sunswell Greens Conquered Florida Retail

[Sunswell Greens](#) just proved something every commercial grower should study. After seven years as Green Life Farms, this Florida operation rebranded without missing a beat—and their retail partnerships tell the whole story.

Publix carries their products. So does Winn-Dixie. The Boys Farmer's Markets stocks their shelves. These aren't small accounts. These are the retailers that move serious volume across Florida.

John Hallé Jr., Director of Sales and Operations, revealed their strategy: "Florida's sunshine + wellness = Sunswell." Smart branding, but the real competitive advantage runs deeper.

Two state-of-the-art hydroponic greenhouses in Lake Worth and Punta Gorda give them year-round production capacity. OMRI-certified practices and non-GMO standards meet retailer requirements. They positioned themselves as Florida-grown when local sourcing matters.

The rebrand happened with zero service disruptions. Same ownership, same growing expertise, same operational team. Operational maturity that retail buyers trust.

Here's what smart growers should notice: Sunswell didn't just grow microgreens and lettuce. They built relationships with major food retailers first, then scaled production to meet demand. Their tagline "Life's too short for sad salad" speaks directly to consumer trends.

Commercial growers have a roadmap for retail partnerships. Invest in consistent quality systems. Build local advantages into your brand story. Focus on operational reliability that buyers can count on.

The Florida sunshine advantage won't work everywhere, but the retail partnership strategy will.

Source: "Green Life Farms of Florida is Now Sunswell Greens." "Perishable News", September 9, 2025. <https://perishablenews.com/produce/green-life-farms-of-florida-is-now-sunswell-greens/>



Universities Now Teaching Microgreens Business

St. Mary's University just launched something smart commercial growers should track. Starting January 2026, they're offering a [Small Scale Food Production certificate program](#) focused specifically on microgreens and herbs.

Tony Stolz, university spokesperson, revealed the numbers behind this move: "If you look at how much microgreens we import from the U.S. right now, it's amazing. There's absolutely no reason why we can't grow that ourselves more economically."

Canada-US trade tensions created this opportunity. Tariffs plus transportation costs make imported microgreens expensive. Local producers have a massive advantage right now.

The program costs \$1,250 total—five courses over five months, completely online. Students get a practicum and two months of business support afterward. That's institutional backing for new growers entering the market.

Universities don't create programs without seeing demand. St. Mary's is marketing across Alberta and into British Columbia. They recognize microgreens as ideal for small-scale production because they're "delicate" and "can't be transported well."

Smart commercial growers see the pattern here. Educational institutions are training your future competition, but they're also validating your market. When universities invest in curriculum development, they've identified a growing industry.

The program emphasizes both indoor and outdoor growing methods, plus business success strategies. Fresh graduates will enter your market with structured knowledge and institutional credibility.

This isn't just about education—it's market intelligence. Canada is building infrastructure to replace US imports with local production.

Source: Reiter, Nathan. "Hungry for knowledge? New course teaches you to grow food." Lethbridge Herald, September 10, 2025. <https://www.pressreader.com/canada/lethbridge->

CREATIVE RECIPES



Ancient Strength Seeds

Long before smoothie bowls took over Instagram, Mayan warriors carried tiny pouches at their waists. Inside? Chia seeds. One tablespoon sustained them for 24 hours.

Dating back to 3500 B.C., chia ([Salvia hispanica](#)) was sacred to Mesoamerican cultures. The name literally means "strength" in Mayan. Aztecs ranked it as their third most vital crop—behind only corn and beans. They transformed these mucilaginous seeds into drinks, gruels, flour, and medicine. Warriors mixed them with water, creating energy-packed gels for journeys.

Chia wasn't just food. It served as currency for tribute payments and appeared in religious ceremonies. Spanish conquistadors banned cultivation in the 1500s, viewing its ritual use as threatening.

Today's chia puddings and smoothies? Ancient wisdom meeting modern kitchens. Those omega-3 packed seeds that fueled pre-Columbian civilizations now power breakfast bowls.



Tenochtitlan Warrior Bowl

Picture this: you're channeling ancient Mayan warriors, but instead of preparing for battle, you're fueling your afternoon with the same powerhouse ingredients they carried into combat.

This isn't your typical grain bowl—it's a culinary time machine.

I stumbled across this combination while researching how pre-Columbian cultures actually used chia.

Turns out, they weren't just sprinkling seeds on yogurt. They were sautéing the tender leaves (what we now call microgreens) with their grains, creating complete nutrition in one vessel.

The result?

Pure sustained energy that would make any Aztec proud.



1

Recipe Information

Prep Time: 15 minutes

Cook Time: 20 minutes

Category: Main Course

Method: Sauté & Assembly

Cuisine: Mexican-Inspired

Yield: 2 servings

2

Ingredients

For the Base

- 1 cup quinoa (or amaranth for extra authenticity)
- 2 cups vegetable broth
- 1 tbsp chia seeds
- 1 lime, juiced

For the Sautéed Chia Microgreens

- 1.5g fresh chia microgreens (about 2 generous handfuls)
- 1 tbsp olive oil
- 2 cloves garlic, minced
- 1/2 white onion, diced
- 1 poblano pepper, roasted and diced
- 1/2 tsp ground cumin
- 1/4 tsp smoked paprika
- Sea salt to taste

Assembly Elements

- 1/2 cup black beans, drained and rinsed
- 1 avocado, sliced
- 2 tbsp pumpkin seeds, toasted
- 1/4 cup queso fresco, crumbled
- 2 tbsp fresh cilantro

Warrior Sauce

- 2 tbsp tahini
- 1 tbsp lime juice
- 1 tsp honey
- 1/2 tsp chipotle powder
- 2-3 tbsp warm water

3

Preparation

Build the foundation

1. Rinse quinoa until water runs clear.
2. Combine with vegetable broth in a saucepan.
3. Bring to a boil, reduce heat, cover and simmer 15 minutes.
4. Stir in chia seeds and lime juice during last 5 minutes. The seeds will create that ancient gel texture warriors relied on.

Prepare your microgreens

5. Heat olive oil in a large skillet over medium heat.
6. Add onion and garlic, cooking until fragrant (about 3 minutes).
7. Add poblano pepper, cumin, and paprika.

3

Preparation
(continued)**The magic moment**

7. Add chia microgreens to the skillet.
8. Here's where it gets interesting—unlike regular greens, these little powerhouses need just 60-90 seconds. They'll wilt quickly but retain their peppery bite and all those concentrated nutrients.
9. Season with salt.

Make the warrior sauce

10. Whisk tahini, lime juice, honey, and chipotle powder.
11. Add warm water gradually until you reach a drizzling consistency.

4

Plating

Divide warm quinoa between two bowls.

Top with generous scoops of sautéed chia microgreen mixture.

Arrange black beans, avocado slices, and queso fresco around the bowl.

Drizzle with warrior sauce and garnish with toasted pumpkin seeds and cilantro.

Want more recipes like this?



5

Benefits of Brassicae Microgreens for Health

These tiny leaves pack 4-6 times more nutrients than mature chia plants.

You're getting concentrated omega-3 fatty acids, complete proteins, and antioxidants that support heart health and reduce inflammation.

The microgreens also provide more bioavailable nutrients than seeds alone—your body can actually use them faster. Plus, that peppery flavor?

It's from compounds that support detoxification pathways.

Unlike raw seeds that take time to digest, sautéed microgreens deliver immediate nutritional impact while maintaining their structural integrity.

IN THE NEWS

Your Microgreens Beat Expensive Hair Treatments

Dr. Greger's latest research dropped a bombshell that should change how you think about hair loss. In controlled studies, people who consumed specific plant compounds saw a 40% increase in hair counts over six months. That beats most expensive treatments.

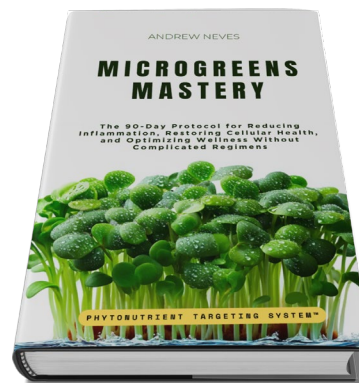
Here's what caught my attention: [gut health drives hair growth more than genetics](#). Population studies show raw vegetables and fresh herbs protect against hair loss, while processed foods accelerate it. Your microgreens fit perfectly into this picture.

Broccoli and radish microgreens contain the same isoflavones found in the study. Participants needed just 75mg daily - that's about what you get in a handful of fresh microgreens. The research used soy compounds, but microgreens deliver similar benefits without processing concerns.

Commercial growers, listen up. Your customers don't know their morning salad could outperform \$200 hair treatments. Chefs, you're serving medicine disguised as garnish.

Want the complete breakdown? Check out the detailed analysis at [Microgreens for Hair Health – A Natural Boost for Luscious Locks](#) and grab the comprehensive E-book guide, [Transform Your Hair Naturally with Microgreens](#).

Source: Michael Greger, "Food for Hair Growth," NutritionFacts.org, accessed September 15, 2025, <https://nutritionfacts.org/video/food-for-hair-growth/>



Join Microgreens World for a four-week deep-dive into the most common avenues for building and strengthening your microgreens customer base. Unlike most programs, you're watching a bunch of long and boring theoretical videos that leave you more confused than when you started. The goal of the Commercial Microgreens Startup program is to do this together, one step at a time - so you can finally have financial independence!

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