Volume 2025 Number 11 **MICROGREENS WORLD** Monday March 17, 2025

WEEKLY DIGEST

NANOPLASTIC AND MICROPLASTIC UPTAKE IN MICROGREENS: A GROWING CONCERN

SEEDS OF IMPROVEMENT: DID MICROGREENS CURE HER IDIOPATHIC INTRACRANIAL HYPERTENSION AND RADICULOPATHY?

COMMUNITY NEWS: Microgreens Revolution in Urban Dallas, Texas, USA

CREATIVE RECIPES: Radish Sango Microgreens Lassi

EMERGING INDUSTRY NEWS: Federal Food Funding Cuts Affecting Microgreens Farmers

"Delivered to Your Inbox Every Monday," your summary digest of the latest microgreens, urban, vertical farming, new trends, and exciting startup stories from around the world.

Nanoplastic and Microplastic Uptake in Microgreens: A Growing Concern

Vol. 2025 No. 11 Monday, March 17, 2025

Nutrition Science

Seed of Empowerment

Follow the inspiring journey of Rochelle Borromeo Yamzon, a certified public accountant and overseas Filipino worker in Dubai.

Initially captivated by the idea of growing microgreens while working remotely during the pandemic, she marked this interest as a future endeavor upon returning to the Philippines.

However, life took an unexpected turn when she was diagnosed with **Idiopathic Intracranial Hypertension** and **radiculopathy**, which didn't dampen her spirit; instead, it galvanized her towards microgreens.

> Now, my MRI is clear of IIH. I am not a health expert and cannot say for certain if my healing was due to microgreens, but I believe that incorporating them into my diet helped me recover," she shared.

Her growing interest turned therapeutic as she embraced farming, which paved the way for personal healing and a greater mission.

As the travel restrictions eased, she and her husband purchased Borromeo Family Farm in Negros Occidental.

They embarked on a new chapter by cultivating microgreens.

The microgreens, initially a hobby, blossomed into a therapeutic pursuit and, ultimately, a business venture.

Utilizing their farm, they started cultivating and experimenting with several microgreens and herbs.

With a shift from personal health exploration to a business endeavor, Rochelle capitalized on the potential of microgreens.

Public interest surged following a feature in the Visayan Daily Star, leading to exhibitions and a partnership with major stores, helping establish a notable business presence in the region.

Not only did this reinforce her commitment to health and clean eating, but it also created job opportunities for local women, empowering them and contributing positively to their families.

Rochelle's narrative is a testament to resilience, echoing the potential of microgreens in fostering health, community support, and environmental consciousness.

The expansion of Borromeo Family Farm stands as a shining example of how personal challenges can transform into communal successes.

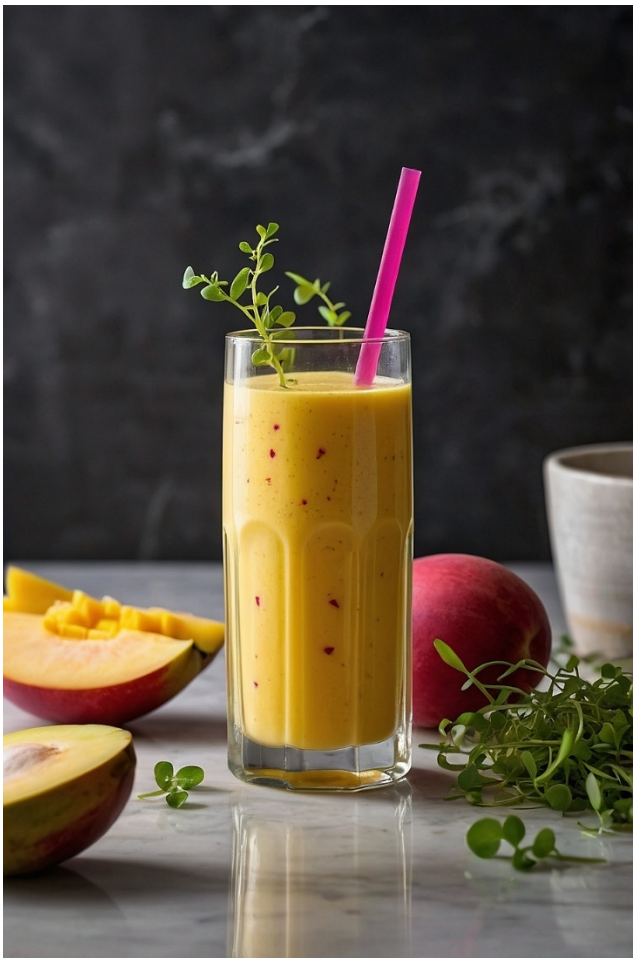
Source: Beltran, R. (2025, March 13). Sowing seeds of empowerment. *Visayan Daily Star*. https://visayandailystar.com/sowing-seeds-of-empowerment/

Creative Recipes

Radish Sango Microgreens Lassi

The humble lassi – that cooling yogurt drink we all adore – gets a magnificent makeover with radish sango microgreens.

These tiny powerhouses transform an everyday beverage into something extraordinary, infusing it with vibrant color and a nutritional punch that will leave your body singing joyfully.



Recipe Information

- Prep Time: 15 minutes
- Cook Time: None (fermentation time for dahi: 8 hours)
- Category: Beverage
- Method: Blending
- Cuisine: Indian-Fusion
- Yield: 200ml (1 serving)

Ingredients

- 140ml dahi (70% of total volume, made from toned milk with 3% fat)
- 5g radish sango microgreens powder (2.5% of total volume)
- 55ml water
- Powdered sugar to taste (approximately 10-15g)
- 1/2 tsp CMC (Carboxymethyl Cellulose) as a stabilizer

Preparation

1. For the dahi: Heat toned milk to 85°C for 15 minutes, then cool to 42°C. Add freeze-dried lactic culture (like Christen Hansen Exact Dahi 2), mix well, and let ferment at 42°C for 6-8 hours until set.
2. Once your dahi is ready, combine it with water in a blender.
3. Add the radish sango microgreens powder, powdered sugar, and CMC.

4. Blend until smooth and thoroughly combined, about 1-2 minutes.
5. Pass through a fine strainer if needed for extra smoothness.
6. Chill at 5°C for at least 1 hour before serving for best flavor development.

Plating

Pour the vibrant lassi into a tall, chilled glass.

Garnish with a pinch of fresh radish sango microgreens on top for a beautiful color contrast and a hint of what's inside.

Serve immediately with a reusable straw made of bamboo or stainless steel – a small gesture toward sustainability that complements the mindful nature of this health-forward beverage.

Benefits of Radish Sango Microgreens for Health

Radish sango microgreens are nutritional dynamos, containing significantly higher concentrations of bioactive compounds than their mature counterparts.

This lassi delivers impressive amounts of phenolics (114.00 mg GAE/100g), flavonoids (67.77 mg QUE/100g), anthocyanins (48.23 µmol/100g), and ascorbic acid (152.77 mg/100g).

These compounds work together to provide powerful antioxidant protection, support immune function, and neutralize harmful free radicals in the body.

The probiotics from the fermented dahi enhance digestive health.

At the same time, the microgreens contribute to overall wellness with their anti-inflammatory properties.

Source: Gunjal, M., Khalangre, A., Singh, J., Kaur, S., Ercisli, S., Macit, E., & Rasane, P. (2025). Process optimization for microgreens-based dairy (lassi) beverage: Consumer acceptability, bioactive composition, and storage life using kinetic modeling. *Journal of Stored Products Research, 112*, 102596. https://doi.org/10.1016/j.jspr.2025.102596

Community News

Torrington's Tiny Greens Revolution at Green Gorilla Farm

Green Gorilla Farm in Torrington, Connecticut, USA, owned by Ed Patterson and Anthony Holmes, specializes in cultivating microgreens—young vegetables with a high concentration of nutrients and flavors.

The farm on Winsted Road uses indoor controlled microclimates to grow various microgreens such as arugula, broccoli, kale, and basil.

The microgreens offer the benefits of intense flavors and heightened nutritional content compared to mature vegetables, making them appealing for culinary uses.

Patterson's interest in microgreens sprouted from their popularity in the 1990s in culinary circles.

It is backed by research suggesting significant health benefits, especially the compound **sulforaphane** found in broccoli microgreens, which may have **chemopreventive** properties against cancer.

Microgreens are grown in organic media without the need for light during germination, and they are quickly harvested, often within two weeks, for varieties like radishes.

Suresh Ghimire of the University of Connecticut praises their nutritional density and flavor diversity.

Patterson, who owns MissFits Boot Camp next door, started cultivating microgreens due to

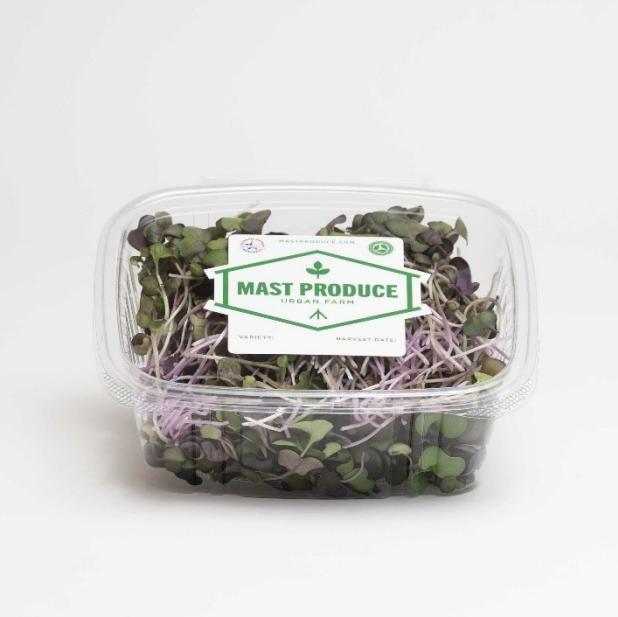
their potential for high nutritional value and customer interest.

The farm aims to expand its offerings by including culinary mushrooms and produce.

It is working on distributing to local markets and restaurants.

Source: Brewster, S. (2025, March 10). New Torrington Farm specializes in baby plants that pack a powerful punch. CT Insider. Retrieved from https://www.ctinsider.com/waterbury/article/torrington-green-gorilla-farm-microgreens-20206815.php

Microgreens Revolution in Urban Dallas



The article discusses Trey Mast, the owner of Mast Produce Urban Farm, focusing on his journey from hobbyist gardener to business owner.

Mast's interest in gardening began in Tokyo.

It developed further in Brooklyn, but it wasn't until living in Dallas and the onset of the COVID-19 pandemic that he seriously delved into urban farming.

Inspired by the inefficiencies he noticed in the local produce supply chain, particularly the importation of tomatoes from far distances despite local growing capabilities, Mast began researching food supply chains and nutritional content.

This exploration led him to microgreens, which are nutritious, space-efficient to grow, and can be produced locally.

Mast Produce Urban Farm aims to deliver high-nutrition food locally, minimizing the distance

from farm to table, thus reducing environmental impacts.

The farm uses environmentally friendly packaging and has expanded its offerings to include mushrooms and edible flowers.

Having moved frequently due to military service, Mast brings exemplary customer service to his business, which is influenced by Japanese culture.

His strategy for business growth includes grassroots marketing—volunteering in school gardens and networking within his community—as well as direct engagement with restaurants and chefs, emphasizing convenience and product quality.

Mast is committed to expanding his product line and urban farming initiatives.

Source: Insights, B. (2025). Meet Trey Mast. Canvasrebel.com. https://canvasrebel.com/meet-trey-mast/

Taste the Freshness: Nutrients in Microgreens

"Planting the seed -- let's talk microgreens" is the slogan at High Country Microgreens. Sherry and Robert Church are the owners and have been operating since 2023.

The article discusses microgreens' nutritional and culinary benefits, emphasizing their status as nutrient-rich superfoods full of vitamins and minerals.

Popular microgreen varieties include broccoli, sunflower, pea shoots, cabbage, and radish.

At the same time, specialty options include sorrel, basil, arugula, fennel, cantaloupe,

chive, wasabi mustard, and amaranth.

Broccoli microgreens are highlighted for their high concentration of sulforaphane, a compound also present in Brussels sprouts and cabbage.

They are known for supporting antioxidant production and reducing inflammation, thus benefiting heart health.

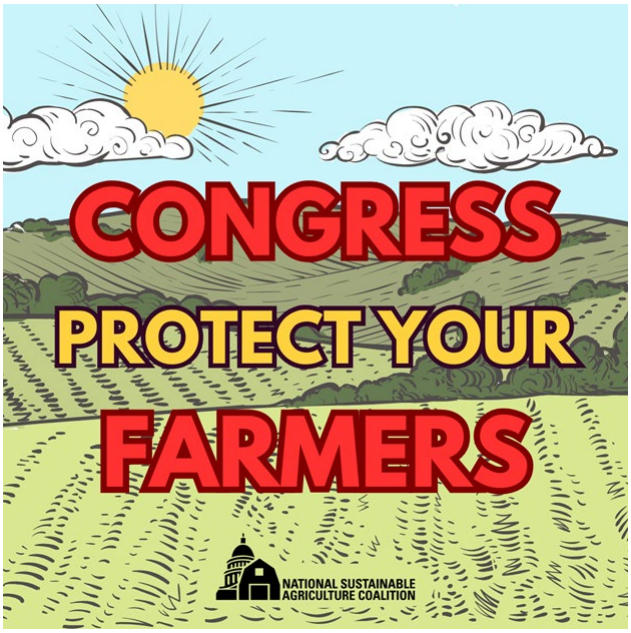
The article underscores the importance of consuming raw microgreens to retain their nutritional value. Microgreens add flavor and visual appeal to meals, such as spicy radish and cabbage microgreens enhancing taco dishes.

High Country Microgreens advocates for integrating microgreens into meals, considering them a lifestyle choice supporting health and community.

The company actively participates in local markets and offers a subscription service for fresh delivery, catering to diverse dietary preferences.

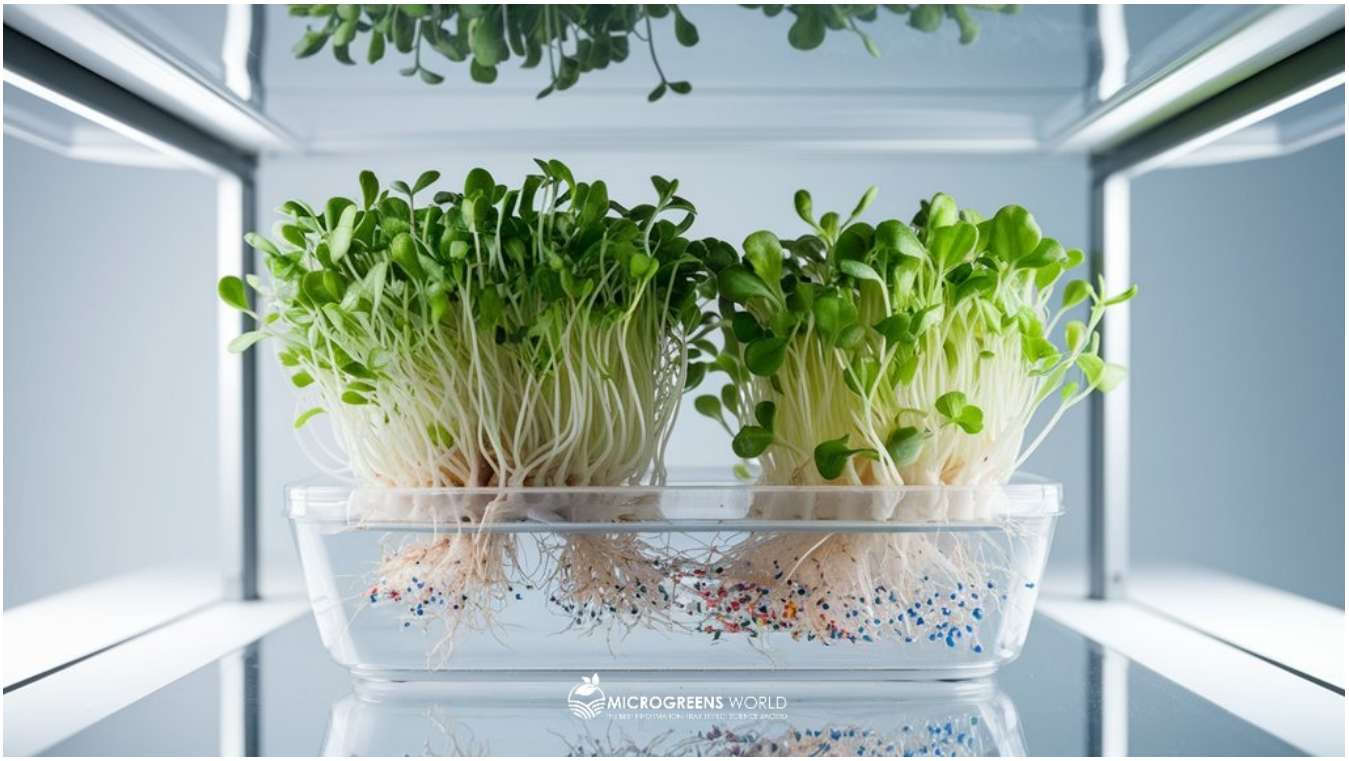
Additional information can be gathered from High Country Microgreens' website or customer service.

Source: Church, S. (2025, March 13). Gardening etcetera: Do you know about microgreens? *Special to the Daily Sun.* Retrieved from https://azdailysun.com/news/local/hummingbird-populations-dwindling/article_164beca0-ff66-11ef-a049-fbf57bf0981f.html



FEATURED ARTICLE

Nanoplastic and Microplastic Uptake in Microgreens: A Growing Concern



Back in January, a member of our community from Florida posed the following to me: "*I'm wondering if all this controversy about microplastics could affect microgreens being grown in a plastic medium. Even though we consume the upper part of the microgreen, could it still be a health hazard?*"

And then this past week, one of our partners asked, "*Do microgreens uptake nanoplastics through the root systems? Has there been a study on this?*"

I thought it was time I gave an answer because I'm not alone in the concern that nanoplastics and microplastics may not only have found their way to our food systems but may be causing damage.

Microgreens can absorb **nanoplastics**[1] (particles smaller than 1,000 nanometers) and **microplastics** (fragments under 5mm) through their root systems, potentially translocating these contaminants to edible portions.

Research shows that 13-18% of absorbed nanoplastics move from roots to shoots, with absorption rates varying between plant species—**monocots generally absorb fewer particles than dicots.**

Synthetic growing media, plastic mulches, and **contaminated irrigation water** represent primary contamination sources.

Switching to natural growing media and implementing water filtration can significantly reduce this emerging **food safety concern**.

Let's dive into the details.

The Invisible Threat: Understanding Nanoplastics and Microplastics in Food Systems

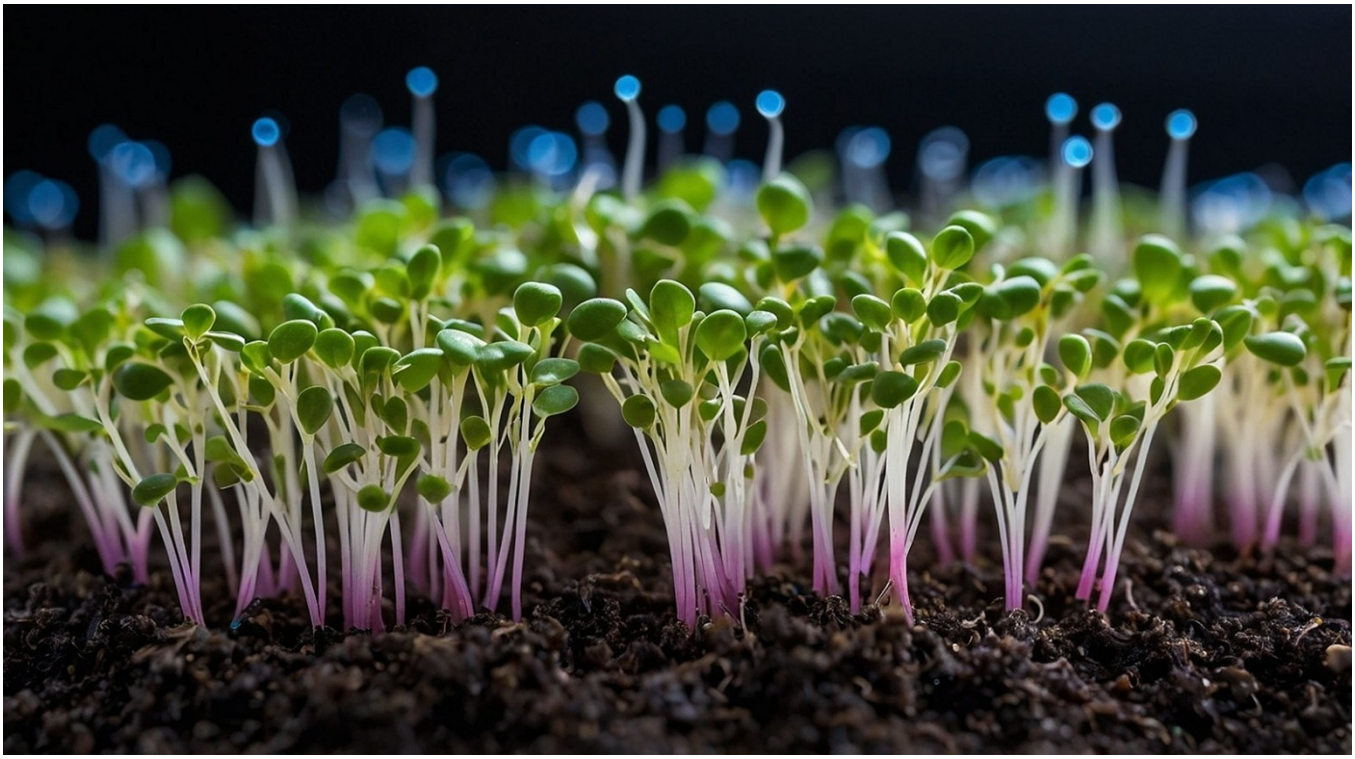
In this invisible world of nanoplastics, microgreens face a siege from multiple fronts.

These nutrient-packed seedlings, harvested in infancy, are particularly vulnerable to microscopic invaders that arrive through various environmental channels.

The growing medium—often synthetic mats that shed invisible fibers—directly contacts developing roots.

Meanwhile, irrigation water carries its own invisible payload, introducing particles that microgreens readily absorb and transport upward.

[1] A nanometer is much smaller than a speck of dust and thousands of times smaller than a human hair.



The threat doesn't stop there.

Plastic containers leach compounds during germination, while airborne particles quietly settle on tender shoots.

Even soil, the most natural growing media, potentially harbors plastic pollutants from our plastic-saturated world.

Studies reveal a concerning reality: between 13-18% of nanoplastics absorbed by roots eventually reach the edible portions above ground.

Exposure Pathway	Impact on Microgreens	Prevention Strategy
Synthetic growing mats	Direct root contact with shedding fibers	Employ natural fiber alternatives
Contaminated water	Nanoplastic translocation to stems/leaves	Filter irrigation sources
Plastic containers	Leaching during germination	Switch to glass/ceramic
Airborne particles	Surface deposition	Cover growing areas

Soil pollution	Root absorption (13-18% reach shoots)	Choose verified organic media

For growers seeking healthier harvests, understanding these pathways represents the first step toward cleaner cultivation practices.

Root to Shoot: How Microgreens Absorb and Transport Nanoplastics

The journey of nanoplastics through microgreens follows a fascinating—if somewhat troubling—path scientists have recently begun to map.

Inside the plant's tissues, these minuscule particles behave like travelers navigating a complex transit system, with roots as the main terminal and shoots as the final destination.

As pointed out earlier, studies of edible cress reveal that while roots act as the primary collection point for nanoplastics, approximately 13-18% manage to secure "tickets" to the upper reaches of the plant.

This creates a natural filtration effect that, while not perfect, helps limit contamination in the parts we eat.

This concentration gradient offers a small comfort for microgreen enthusiasts—your **sunflower shoots contain significantly fewer plastic particles** than their root systems below.

The distribution pattern suggests practical implications for harvesting practices.

You're likely reducing potential exposure by cutting microgreens well above the growing medium (as most growers already do).

Yet the evidence from vegetables like **pak choi and radish** reminds us that this natural filtration system has limits—nanoplastics can and do reach edible tissues despite the plant's best efforts to contain them at the root level.

Nature's checkpoint system works but wasn't designed to catch synthetic intruders measured in billionths of a meter.

Growing Medium Matters: Nanoplastic Sources in Microgreen Production

Every drop of water that nourishes your microgreens tells a secret story about potential contamination.

In the pristine-looking world of microgreen cultivation, water emerges as perhaps the most underestimated pathway for nanoplastic introduction—**a liquid trojan horse carrying invisible particles to tender seedlings**.

The journey begins at the source, where water may already contain environmental microplastics. Still, the plot thickens as this water travels through plastic tubing, sits in plastic reservoirs, or gets stored in plastic containers.

Each step adds its own microscopic contribution to the contamination narrative.

Like miniature plastic hitchhikers, these particles ride the irrigation stream directly to root systems, eager to absorb any available moisture.

Research has confirmed what many might suspect, but few have considered.

These water-borne particles can go from roots into the shoot tissues we harvest and eat.

The pathway from water to plant to plate represents what scientists call a **critical control point**.

In this pathway, intervention could meaningfully reduce exposure.

For the conscientious grower, water filtration becomes not merely an option but a necessity.

Though an investment, advanced filtration systems offer a protective barrier against this invisible influx, preserving the nutritional integrity and safety of these otherwise health-promoting crops.

Microgreens Response to Nanoplastic Exposure: Growth, Stress, and Adaptations

When microgreens encounter nanoplastics, they don't simply surrender—they respond with remarkable biological ingenuity.

These young plants deploy an arsenal of **defensive strategies** that appear almost purposeful in their design.

Studies reveal they can activate **stress-response pathways** similar to those used against heavy metals, ramping up antioxidant production to combat cellular damage from these foreign invaders.

Perhaps most fascinating is how microgreens engage in a form of **strategic containment**.

Only 13-18% of nanoplastics reach the shoots while most remain trapped in roots, suggests a sophisticated **compartmentalization strategy**—as if the plant intuitively protects its most valuable photosynthetic tissues at the expense of its roots.

The plant's vascular system functions like a **biological security checkpoint**, scrutinizing particles based on size and charge.

This selective barrier, while not foolproof, demonstrates an extraordinary evolutionary flexibility.

Plants have never encountered synthetic microplastics in their evolutionary history.

Yet, they appear to have repurposed existing defense mechanisms to address this novel threat.

Think of it as the plant's version of **adaptive immunity**—not acquired through previous exposure but cleverly repurposed from ancient defense systems that evolved to handle natural threats.

This remarkable adaptability speaks to the resilience encoded in the simplest plant tissues.

From Plant to Plate: Consumer Exposure and Health Implications

The scientific community finds itself in a peculiar position regarding understanding how nanoplastics in microgreens might affect our

health—we know enough to be concerned but not enough to be definitive.

It's like having **complex puzzle pieces** but missing the corner pieces that would frame the entire picture.

Laboratory studies have begun revealing troubling possibilities: these microscopic particles can potentially cross biological barriers that evolved long before synthetic plastics existed.

Once inside human tissues, nanoplastics might reach organs like the **liver and brain**—territories where foreign synthetic materials don't belong.

The good news? Acute toxicity appears minimal at current environmental exposure levels.

The concerning news? Scientists worry about **bioaccumulation effects**—the gradual buildup of these persistent particles over years

of consumption—and their potential to disrupt normal cellular functions in ways we're just beginning to understand.

Food Category	Primary Exposure Source	Relative Risk Level
Seafood	Direct ingestion from oceans	High
Bottled water	Packaging degradation	Medium-high
Microgreens	Growing medium contamination	Variable
Root vegetables	Soil contamination uptake	Medium
Packaged foods	Processing and packaging	Medium

One study noted that nanoplastics in edible plant tissues have "raised serious concerns regarding possible implications for food safety" [3].

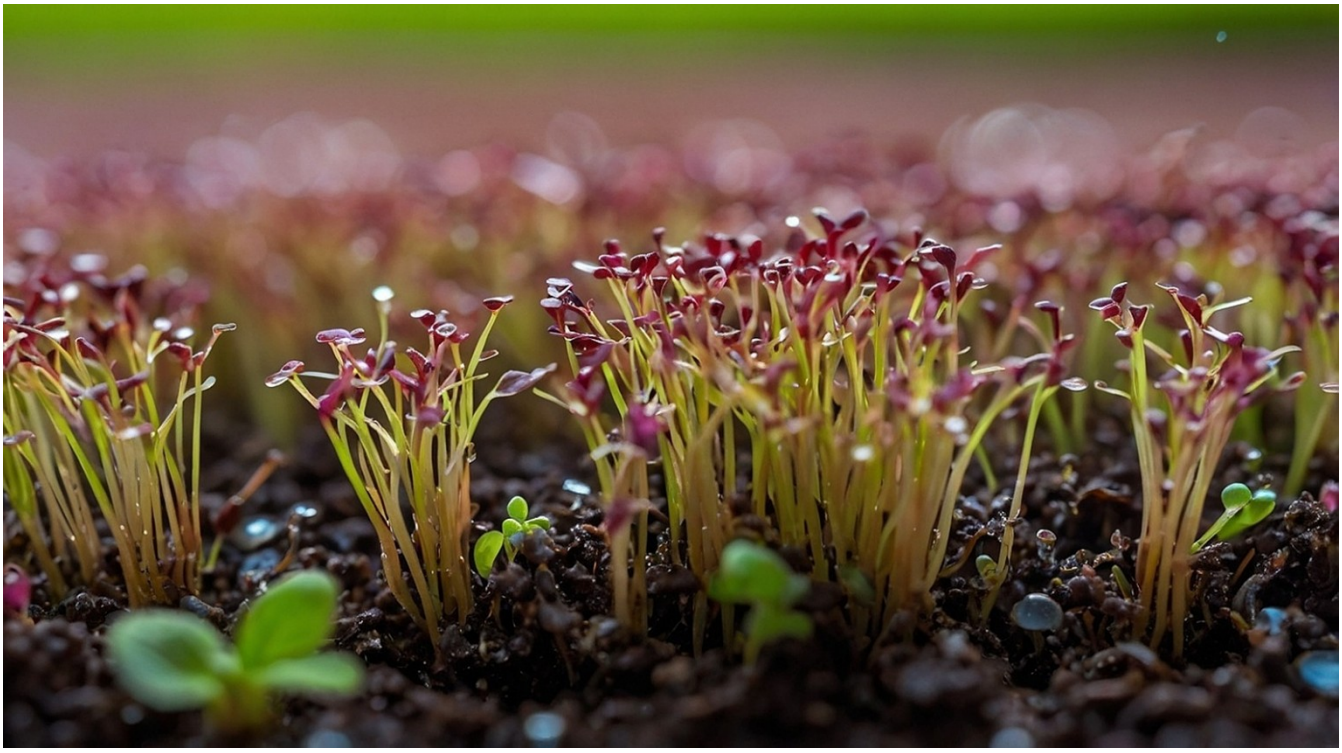
This measured scientific language represents a significant red flag, prompting researchers to call for more targeted investigations into what happens when these particles become unwitting ingredients in our daily meals.

The uncertainty might be reason enough for cautious growing practices until science delivers more precise answers.

Minimizing Contamination: Best Practices for Safer Microgreen Production

Whether operating a commercial enterprise or tending trays on a kitchen counter, the modern microgreens grower faces a moment of reckoning that mirrors more significant agricultural dilemmas.

How do we **balance productivity with purity** when science reveals new concerns about nanoplastic contamination?



The evidence that plants can absorb and move plastic particles from their growing environment to their edible tissues poses legitimate food safety questions.

Yet practical solutions exist that don't require abandoning these nutrient-dense crops.

The **transition from synthetic fiber mats** to natural alternatives like coconut coir, hemp, or jute represents a straightforward intervention that introduces no new microplastics to the growing environment.

While these **natural materials** might carry a higher initial price tag—a classic sustainability premium—they directly address the documented ability of microgreens to uptake plastic particles through their roots.

Consider it an investment in both product integrity and consumer confidence.

Beyond growing media, conscientious producers can implement a **contamination reduction strategy** that includes sourcing clean water, using non-plastic containers and tools, and creating plastic-free harvest zones.

These steps create multiple barriers against nanoplastic infiltration while maintaining the efficiency that makes microgreens viable as commercial crops and home-grown superfoods.

Future Directions: Research Needs and Regulatory Considerations

Microgreens present a fascinating conundrum in the nutritional balancing act we all perform daily.

These tiny powerhouses pack a concentrated punch of **vitamins, minerals, and antioxidants**—sometimes containing up to 40 times the nutrients of their fully-grown counterparts.

Yet the shadow of nanoplastic contamination raises questions we can't easily dismiss.

The modern eater faces what scientists might call a **risk-benefit calculation**.

On the one hand, research confirms microgreens can indeed absorb plastic particles from their growing environment.

On the other hand, the health implications of consuming these minute quantities remain fuzzy at best, like trying to make out distant mountains through a morning mist.

Abandoning microgreens would eliminate potential nanoplastic exposure but would also mean **sacrificing remarkable nutritional density**—precisely the reason many of us incorporated these tiny greens into our diets in the first place.

The pragmatist's approach emerges naturally: continue enjoying microgreens, but select those grown on **natural mediums** like coconut coir or hemp mats.

Approach	Target Trait	Potential Benefit	Research Status
Genetic screening	Root barrier function	Blocks uptake at soil interface	Early exploration
Metabolic engineering	Plastic-degrading enzymes	Breaks down absorbed particles	Theoretical
Traditional breeding	Reduced translocation	Limits movement to shoots	Not started
Root exudate modification	Particle aggregation	Prevents absorption	Conceptual

These natural alternatives introduce no synthetic particles while preserving all the nutritional advantages that make microgreens worth growing.

It's a solution that honors both caution and common sense—acknowledging concern without abandoning a food that offers genuine benefits in our increasingly processed food landscape.

What it all boils down to: Nanoplastic and Microplastic Uptake in Microgreens

The presence of nano- and microplastics in microgreens represents an emerging **food safety challenge** requiring immediate attention.

Producers must adopt preventative measures as research evolv**es,** while consumers deserve transparency about potential risks.

Moving forward, **interdisciplinary collaboration** between agricultural scientists, toxicologists, and policymakers will be essential to establish evidence-based growing standards that protect both human health and the nutritional integrity of these valuable plant foods.

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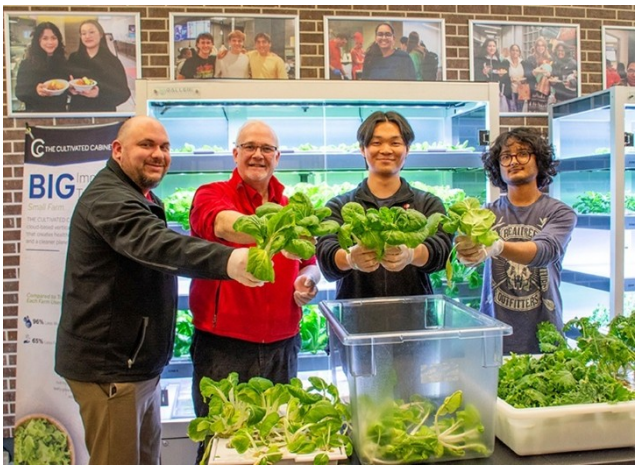
Evidence-based Expertise

Nurturing Freshness: Campus Micro-Farm Revamps Dining



The article discusses the introduction of the "Cultivated Cabinet," a micro-farm initiative by SBU Eats at East Side Dining, Stony Brook University, aimed at promoting sustainable and fresh dining options.

This micro-farm utilizes vertical hydroponic systems to supply hyper-local produce such as leafy greens, herbs, and flowers grown just steps from where they are consumed.

The project is part of a broader effort to enhance food transparency, minimize waste, and reduce transportation emissions, thus contributing to a greener future.

Incorporating a mobile app allows real-time monitoring of crops, ensuring efficient harvests and peak freshness.

A recent graduate, Heather Wickham, was instrumental in integrating the Babylon Micro-farms into campus life, conducting extensive research and advocating for the project's feasibility and benefits.

Ken Ferro and John Hesse, from the SBU Eats team, emphasize the educational and practical benefits of the micro-farm, which enables students to engage in hydroponic farming techniques and appreciate sustainable practices.

Taeyoung (Paul) Kim, now a project technician, supports the cultivation process, furthering

the university's sustainability mission.

Through its blend of practicality and innovation, the micro-farm enhances the dining experience while instilling a deep appreciation for local and sustainable agriculture among the campus community.

Source: Stony Brook University. (2025, March 12). Harvesting innovation: SBU Eats introduces on-campus micro-farm. Stony Brook University News. https://news.stonybrook.edu/university/harvesting-innovation-sbu-eats-introduces-on-campus-micro-farm/

Cultivation Techniques

Microgreens Cultivation Spurs North Bengal Growth

Microgreens cultivation is gaining significant attention in North Bengal, spearheaded by the Centre for Floriculture and Agri-Business Management (COFAM) at the University of North Bengal.

This initiative is tapping into the growing demand for nutritious and organic food while providing lucrative opportunities for local farmers.

Microgreens, which are harvested young, within one to two weeks, are rich in vitamins and antioxidants, reportedly containing up to four times the nutrients of their mature versions.

COFAM is training local farmers and other interested individuals in growing a variety of microgreens, such as mustard, radish, sunflower, and beetroot, among others.

After completing the training, participants receive certificates, and there is potential for

partnerships with the hotel industry to facilitate business opportunities.

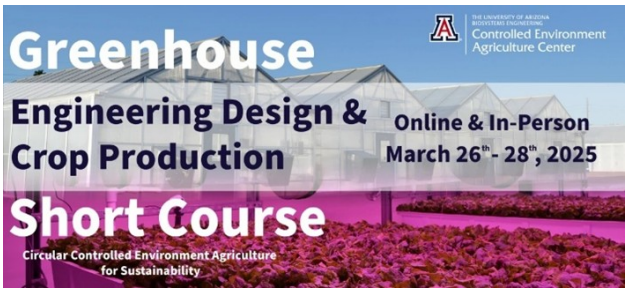
This project allows microgreens to be produced with minimal labor at home by covering non-GMO seeds with a soil layer in a small tray.

Hygiene is emphasized throughout the growth process to ensure high-quality crops.

The microgreens, beneficial in nutrition and flavor, can fetch high market prices, making them a sustainable and profitable venture for communities in North Bengal.

Source: Bag, S. A. (2025, March 16). Microgreens cultivation: New era of income & health in North Bengal. Millennium Post. https://www.millenniumpost.in/bengal/microgreens-cultivation-new-era-of-income-health-in-north-bengal-602562

24th Annual Greenhouse Engineering Design & Crop Production Short Course



Controlled Environment Agriculture (CEA) offers a unique potential for rapidly enhancing the circularity and ultimate sustainability of vegetable and fruit production when distributed throughout the population areas of the country.

Date and time / Location

- March 26 · 9am - March 28 · 4pm MST
- University of Arizona's Controlled Environment Agriculture Center

REGISTER

Emerging Industry News

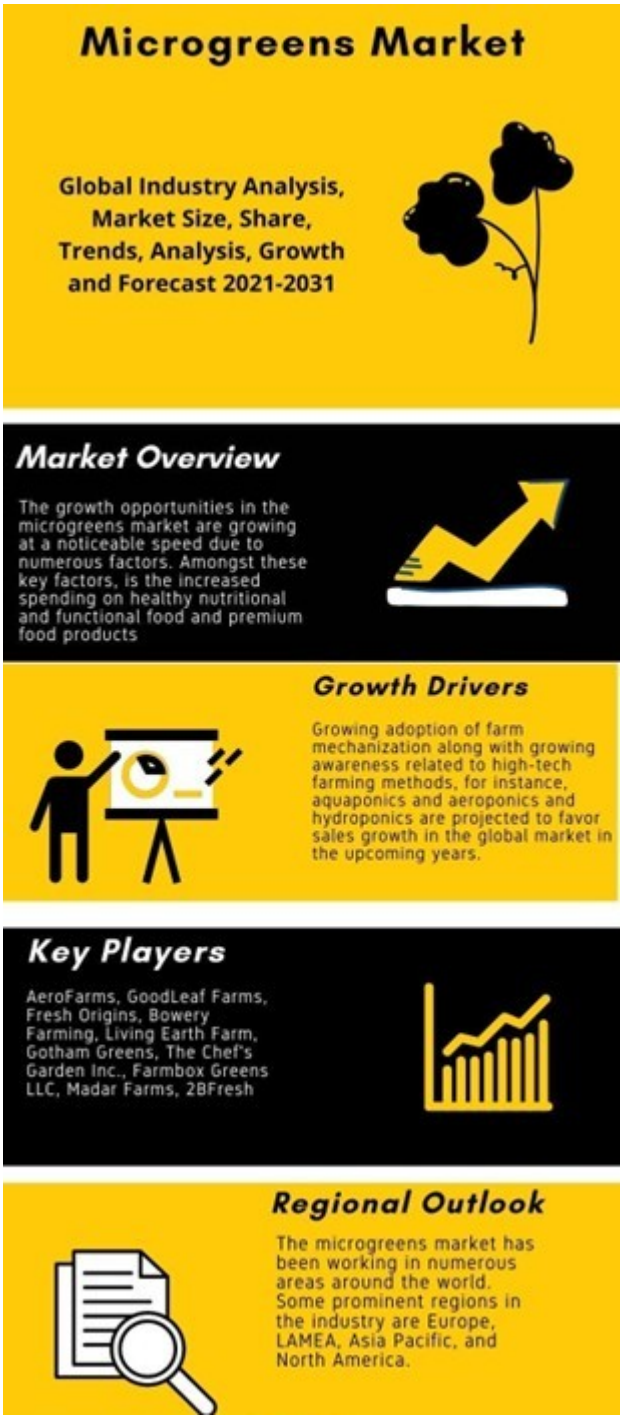
Global Microgreens Market: Future Trends Revealed

The "Microgreens Market 2025" report by Coherent Market Insights offers a **comprehensive analysis of the regional and global microgreens market expected to grow between 2025 and 2032**.

The microgreens market is experiencing notable growth, presenting opportunities and challenges for small-scale growers. Several key trends are shaping the industry landscape.

Market Growth and Consumer Demand

The global microgreens market is projected to reach approximately $7.37 billion by 2032, driven by a compound annual growth rate (CAGR) of 11.1% from 2025 to 2032.



This surge is primarily attributed to increasing consumer health and wellness awareness, leading

to a higher demand for nutrient-dense, locally sourced, and eco-friendly food options.

Advancements in Farming Techniques

Innovations in vertical and indoor farming techniques are significantly contributing to market expansion.

These methods enable efficient cultivation of microgreens in controlled environments, optimizing space utilization and yield.

Adopting such technologies allows small growers to produce high-quality microgreens year-round, meeting the rising consumer demand for fresh produce.

Technological Innovations

Integrating artificial intelligence (AI) and farming automation revolutionizes the cultivation of microgreens.

AI-operated systems monitor plant growth, detect potential issues, and determine optimal harvest times, enhancing efficiency and product quality.

For instance, in March 2024, a UK-based vertical farm introduced biofortified microgreens using advanced technology, setting a precedent for tech-driven agriculture.

Challenges and Considerations

Despite the promising growth, small-scale microgreens growers face challenges such as market competition and the need for technological investment.

Staying informed about industry trends and consumer preferences is crucial for maintaining a competitive edge.

Additionally, implementing sustainable practices and leveraging technological advancements can enhance productivity and meet the evolving demands of health-conscious consumers.

In conclusion, the microgreens market offers substantial growth

potential for small growers who adapt to emerging trends and innovations.

By embracing advanced farming techniques and focusing on quality and sustainability, small-scale producers can thrive in this expanding market.

Source: Smith, J. (2025, December 3). Microgreens Market: Trends, Innovations, Growth, Challenges, and Opportunities by 2025 to 2032. openPR. https://www.openpr.com/news/3912767/microgreens-market-trends-innovations-growth-challenges

Federal Food Funding Cuts Affecting Microgreens Farmers

https://youtu.be/iK966k-eNAM

The article highlights the concerns of some farmers in Wisconsin regarding agricultural cuts announced by the new USDA administration.

It specifically emphasizes the potential impact on a unique Milwaukee farm named Hundred Acre, which operates entirely indoors without the conventional farm setup of fields or tractors.

Since 2021, this farm has been producing fresh produce such as lettuce, basil, and microgreens within a warehouse, delivering them across Wisconsin, including school cafeterias.

The controlled environment within Hundred Acre's warehouse facilitates the cultivation of these greens without machinery, relying solely on manual care and attention.

The article indicates that continuing such innovative farming practices is uncertain, given the recent federal funding cuts.

The emphasis is on how these cuts could affect Controlled Environment Agriculture (CEA) growers like Hundred Acre, who are exploring new farming

methods in response to environmental and economic challenges.

This situation reflects a more significant trend of anxiety among farmers who rely on federal aid to maintain their operations and contribute to local food systems.

Source: Kraemer, S. (2025, March 13). Federal food funding cuts; how Wisconsinites are impacted. FOX6 News Milwaukee; FOX6 Milwaukee. https://www.fox6now.com/news/federal-funding-cuts-how-wisconsinites-impacted

Commercial Best Practices

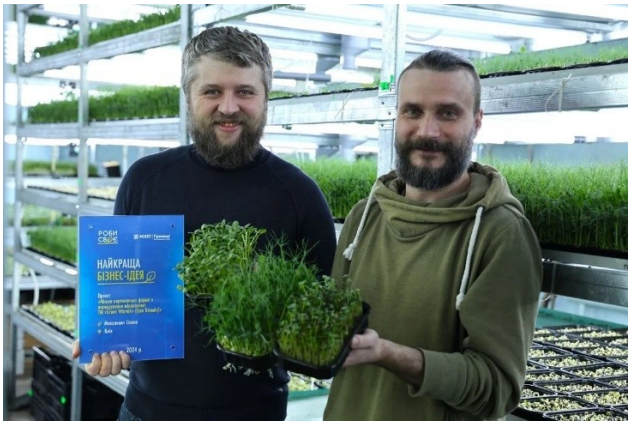
Strengthening Kyiv's Growing Microgreens Enterprise

Kyiv residents Oleksandr Bilyak and Roman Mykhalevych have developed a thriving microgreens business named Green Vitamin City Farm.

They started the venture during the full-scale invasion, securing premises on November 1, 2022, and working under challenging conditions.

The farm's capacity now exceeds 50,000 trays, producing 2,500 kg of microgreens each month.

Key to their success was winning a 100,000 UAH grant in the "Do Your Own" business idea competition by the Charitable Foundation "MHP to the Community," which they used to automate aspects of their operations.



The business benefits from Bilyak's background in agronomy and electronics and Mykhalevych's experience in business development.

Their commitment to organic production without pesticides has fueled consumer demand, particularly for peas, sunflowers, and radishes.

Despite exploring 15 different crops, these varieties remain consumer favorites due to their flavor and longevity.

Positioned in a 4.5-meter-deep basement, the farm naturally avoids many plant diseases and pests.

Their cultivated technique is economically efficient and environmentally friendly and holds the potential for scaling through automation and artificial intelligence.

Their story reflects a growing preference for superfoods that boast nutritional benefits, supporting healthy lifestyles amidst the challenges of war.

Source: Podolyak, L. (2025, March 11). "Do your own": Kyiv residents have strengthened their microgreens business by growing peas, sunflowers, and radishes. Unn.ua; UNN. https://unn.ua/en/news/do-your-own-kyiv-residents-have-strengthened-their-microgreens-business-by-growing-peas-sunflowers-and-radishes

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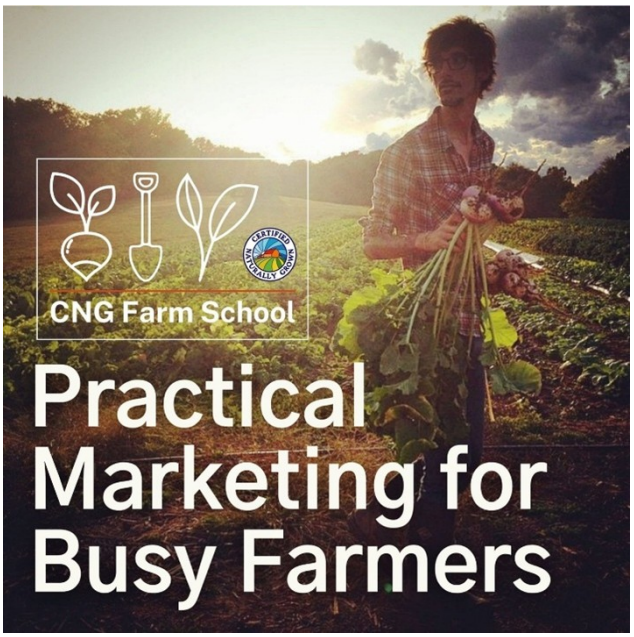

REGISTER

The courses cover social media (that doesn't make you miserable!), effective newsletter communications, and strategic design of your point of sales experience.

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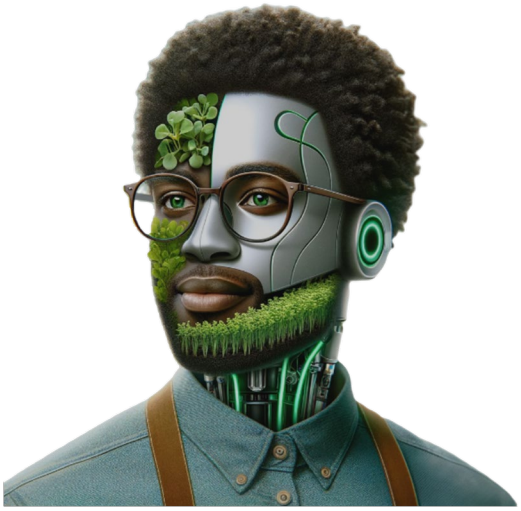
Transform any space into a lush, self-sustaining oasis with the AquaTree Garden ATM1 **for Growing Microgreens**—where effortless elegance meets cutting-edge hydroponic innovation.



Brought to you by **Doc Green**, Andrew Neves' personally trained AI assistant. "You may ask me anything about microgreens."

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