Volume 2024 Number 33 MICROGREENS WORLD Monday September 09, 2024

WEEKLY DIGEST

UNLOCK WEIGHT LOSS: MICROGREENS VS. DIABETES!

UNLOCKING THE FUTURE OF FARMING: AFFORDABLE AUTOMATION FOR SMALL GROWERS!

CREATIVE RECIPES: Broccoli Microgreens Salad with Fish and Avocado
NUTRITION SCIENCE: Stranded in Space? How about Some Microgreens?
CULTIVATION TECHNIQUES: Damping Off: Stop Losing Your Microgreens Now!

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

UNLOCK MARKETING SUCCESS FOR YOUR MICROGREENS BUSINESS

A Marketing Plan for Your Digital Business

GET THE PLAN NOW!

Unlock Weight Loss: Microgreens vs. Diabetes!

Vol. 2024 No. 33 Monday, September 09, 2024

Nutrition Science 5

Stranded in Space? How about Some Microgreens? 5

Creative Recipes 7

Broccoli Microgreens Salad with Fish and Avocado 7

Community News 9

Mark Your Calendars: How to Grow Microgreens (Online) 9

Farmers Market Q&A 10

Urban Farming: A Local Revolution at Hilltop! 11

Growing Young Farmers 12

FEATURED ARTICLE 14

Unlock Weight Loss: Microgreens vs. Diabetes! 14

Evidence-based Expertise 25

Unlocking the Future of Farming: Affordable Automation for Small Growers! 25

Cultivation Techniques 26

Damping Off: Stop Losing Your Microgreens Now! 26

Emerging Industry News 28

Broccoli Microgreens Market to Hit $398.5 Million 28

Aerofarms goes nationwide at Amazon Fresh stores 30

Commercial Best Practices 31

How One Startup in Denmark Disrupted Vertical Farming for Restaurants! 31

COMPREHENSIVE FOOD SAFETY FOR MICROGREENS FARMS

Maximize Safety, Minimize Risks, Safeguard Your Reputation

GET THE GUIDE!

Nutrition Science

Stranded in Space? How about Some Microgreens?

With the recent news that two astronauts in the International Space Station (ISS) would be spending 8 months, not 8 days, in space, I thought it would be good to look at what NASA is doing with growing food on the ISS.

We discuss a presentation by Christina Johnson, a NASA Postdoctoral Fellow, about the cultivation of microgreens for sustainable food production in space.

Mr. Johnson highlights the nutritional benefits of microgreens, which have not been previously grown in space, and their potential advantages for astronauts due to their high vitamin content.

The presentation also addresses the challenges of growing these plants in a space environment, such as the need for heavy fertilizers, power limitations, and the difficulties in mixing water and air.

Why Microgreens Are Suitable for Sustainable Food Production in Space

Microgreens provide an effective way to deliver dense nutrition to astronauts.

They can be grown in microgravity environments, although challenges exist.

Ongoing research is focused on optimizing microgreen cultivation for space missions.

Nutritional Benefits

Dense Nutrition: Microgreens provide a high density of nutrients, making them an excellent supplement to the prepackaged diet typically used by astronauts.

- Radish microgreens provide 180 µg of Vitamin K and 95.8 µg of Vitamin C per 100g.
- Mizuna microgreens offer 200 µg of Vitamin K and 42.9 µg of Vitamin C per 100g.
- Antioxidants: Microgreens are high in antioxidants, which can help combat oxidative stress caused by space travel.

Fresh Food Source: They offer a way to deliver freshly grown produce, which is vital for maintaining the health and morale of astronauts during long missions.

Space Efficiency

Reduced Mass: Growing microgreens can help reduce the overall mass of food that needs to be transported to space, as they can be cultivated in smaller spaces compared to traditional crops.

High Yield: Microgreens are densely sown, allowing for a greater yield in limited growing areas, which is essential in the confined environment of a spacecraft.

Growing Conditions

Adaptability to Microgravity: Research into growing microgreens in simulated microgravity has been conducted, indicating their potential to thrive in space conditions.

Simplicity of Cultivation: Microgreens typically require less time to grow compared to larger crops, facilitating quicker food production cycles.

Challenges and Research

Microbial Counts: There are considerations regarding potentially high microbial counts when growing microgreens in

space, requiring careful management.

Ongoing Research: Experts are being brought in to address the challenges of growing plants in microgravity, suggesting a proactive approach to developing sustainable food sources.

Microgreens present a promising option for sustainable food production in space due to their nutritional density, space efficiency, adaptability to microgravity, and ongoing research addressing cultivation challenges.

Source: *Growing Microgreens for NASA: from simulated microgravity to parabolic flights*. (2022). https://ntrs.nasa.gov/api/citations/20220001849/downloads/Growing%20Microgreens%20for%20NASA-Feb2022-ver2.pdf

Creative Recipes

Broccoli Microgreens Salad with Fish and Avocado

A nutrient-dense salad featuring broccoli microgreens, wild-caught fish, and creamy avocado. This versatile recipe is suitable for both Earth-based meals and adapted space cuisine.

Why Broccoli Microgreens?

Broccoli microgreens are chosen as the best option for this salad due to their exceptional nutritional profile and mild, slightly peppery flavor.

They are:

- Rich in sulforaphane, a compound with potent anti-cancer and anti-inflammatory properties
- High in vitamins C, K, and E
- Good source of calcium and potassium
- Packed with antioxidants
- Mild enough to complement other ingredients without overpowering them

Recipe Information

- Prep Time: 15 minutes
- Cook Time: 10 minutes
- Total Time: 25 minutes
- Category: Main Dish
- Method: Pan-frying and Assembly
- Cuisine: Fusion
- Yield: 2 servings

Ingredients

- 2 cups broccoli microgreens
- 2 (4 oz) fillets of wild-caught fish (e.g., salmon or trout)
- 1 ripe avocado, diced
- 1/4 cup cherry tomatoes, halved
- 1/4 cup cucumber, diced
- 1/4 cup shredded carrots
- 2 tablespoons sunflower seeds

Dressing:

- 2 tablespoons extra virgin olive oil
- 1 tablespoon lemon juice
- 1 teaspoon honey
- Salt and pepper to taste

Instructions

1. Prepare the Fish

- Season the fish fillets with salt and pepper.
- Heat a pan over medium heat and add a small amount of oil.
- Cook the fish for about 3-4 minutes per side or until it flakes easily with a fork.
- Set aside to cool slightly, then flake into large pieces.

2. *Prepare the Dressing:*

In a small bowl, whisk together olive oil, lemon juice, honey, salt, and pepper until well combined.

3. *Assemble the Salad*

- In a large bowl, gently toss the broccoli microgreens, cherry tomatoes, cucumber, and shredded carrots.
- Add the flaked fish and diced avocado.

4. *Finish and Serve*

- Drizzle the dressing over the salad and toss gently to combine.
- Sprinkle sunflower seeds on top for added crunch.
- Serve immediately and enjoy!

Nutritional Benefits

- Broccoli microgreens: Exceptionally high in nutrients, especially sulforaphane, vitamins C, K, and E
- Wild-caught fish: High in omega-3 fatty acids and protein
- Avocado: Provides healthy fats and fiber
- Olive oil: Offers heart-healthy monounsaturated fats
- Lemon juice: Rich in vitamin C and aids in iron absorption
- Vegetables: Provide additional vitamins, minerals, and fiber
- Sunflower seeds: Good source of vitamin E, selenium, and healthy fats

Remember to follow all food safety protocols when preparing and consuming this meal.

Community News

Mark Your Calendars: How to Grow Microgreens (Online)

Oct 24 at 6:30 PM

The River Market Community Co-op is hosting an online class on **October 24 from 6:30 to 8:00 PM**, focusing on growing microgreens.

The University of Minnesota Extension offers the class.

Participants will learn about these quick-growing vegetable and herb seedlings, suitable for indoor cultivation, which enhance salads and various dishes.

The course, taught by Ramsey County Master Gardener volunteers, emphasizes best practices for a healthy landscape and diet.

The cost ranges from free for co-op owners to $5 for others, and attendees must **register online** to receive a Zoom link and handout.

Classes will not have refunds within 48 hours of the start time.

Get Tickets: River Market Community Co-op. (2023, October 24). *How to grow microgreens.* https://www.universe.com/events/how-to-grow-microgreens-online-tickets-GDR61W

Farmers Market Q&A

AeroGreen Urban Farm, established in Southwick, Massachusetts, specializes in hydroponically growing a variety of greens, microgreens, fruits, and vegetables without the use of pesticides, herbicides, or fungicides.

The farm began operations officially in 2019, leveraging techniques from European hydroponics.

A unique feature of AeroGreen's products is that their plants can thrive without deficiencies, making them resilient to pests.

They offer a range of goods, including nutty sunflower microgreens and all-natural dog treats. AeroGreen is a new vendor at the Troy Waterfront Farmers Market, with plans to expand delivery services soon.

Source: Kelly, Jessica. (2024, Sep 4). *Farmers market Q&A: AeroGreen grows greens hydroponically.* https://www.timesunion.com/food/article/aerogreen-urban-farm-grows-lettuces-microgreens-19733195.php

Urban Farming: A Local Revolution at Hilltop!

The recent grand opening of the Mid-Ohio Food Collective's urban farm on the Hilltop marks a significant step in cultivating community connections alongside agricultural innovation.

Located on a seven-acre site, the farm features advanced technologies, including vertical growing towers, hydroponic greenhouses, and a unique mobile growing system, all designed to produce fresh food for local food banks.

The project transforms a previously blighted brownfield into an educational hub, fostering health and wellness among community members.

Attendees of the opening included local officials and agriculture experts, who praised the farm's sustainable approach and its potential to inspire local youth.

The initiative reflects extensive planning by the Mid-Ohio Food Collective to address food insecurity through urban farming and community education.

Future phases intend to expand educational opportunities, including hands-on farming experiences and the development of fruit orchards.

Cordle, D. (2024, September 4). *Hilltop "smart farm" is cultivating community connections.* https://www.columbusmessenger.com/hilltop-smart-farm-is-cultivating-community-connections.html

Growing Young Farmers

The Indian Council of Agricultural Research (ICAR) has launched an initiative to integrate agricultural education into middle school curricula across India, emphasizing agriculture's broader scope beyond just farming.

Part of this involves the creation of agri-clubs and specialized textbooks for students in grades 6 to 8.

The program aims to cultivate a deeper understanding of modern agricultural practices alongside traditional techniques.

It introduces hands-on activities, such as growing microgreens, allowing students to apply their knowledge practically.

This effort is focused on inspiring future generations to recognize agriculture's importance for national development and sustainability.

By bridging gaps in knowledge and skill, ICAR is preparing students to tackle future challenges in the agricultural sector, ultimately shaping the future of India's agrarian economy.

Source: Kumar, D. (2024, September 5). *ICAR launches agri-clubs to educate school students on broad scope of agriculture.* Education Times. https://www.educationtimes.com/article/campus-beat-college-life/99736447/icar-launches-agri-clubs-to-educate-school-students-on-broad-scope-of-agriculture

Successful Marketing of Microgreens: The Guide and Templates

ORDER NOW!

Learn all the essential aspects of growing microgreens successfully!

Instructor: M.S. Karla Garcia

- Hort Americas Technical Service
- Master in Plant Sciences from The University of Arizona
- Recognition by ISHS in strawberry hydroponic research
- Editor: Book Roadmap to Growing Leafy Greens and Herbs
- CEO at Microgreens FLN

This product is a digital download of the class. It's NOT a LIVE class.

REGISTER

FEATURED ARTICLE

Unlock Weight Loss: Microgreens vs. Diabetes!

In the battle against **obesity and diabetes**, an unexpected ally has emerged: microgreens.

These tiny, vibrant plants are packed with **polyphenols**, compounds gaining attention for their role in **metabolic health**.

As the global epidemic of obesity and diabetes continues to grow, understanding how microgreens influence **glucose and fat metabolism** could be crucial for your health journey.

Microgreens, the young seedlings of edible plants, have emerged as a promising solution due to their high concentration of polyphenols.

These naturally occurring compounds interact with taste receptors throughout your body, potentially regulating appetite and improving glucose tolerance.

The Power of Polyphenols

Polyphenols are plant-based compounds known for their **antioxidant properties**.

Found in microgreens, they interact with Type 2 taste receptors (T2R) throughout your gastrointestinal tract.

This interaction triggers the release of hormones essential for **appetite regulation** and **blood sugar control**.

Key benefits of polyphenols include:

- **Antioxidant properties**: Combating oxidative stress associated with diabetes
- **Appetite regulation**: Helping control food intake
- **Blood sugar control**: Improving glucose tolerance

Microgreens: Tiny Powerhouses of Nutrition

Microgreens are young vegetable greens harvested within 14 days of germination.

These seedlings pack a more potent **nutritional punch** than their mature counterparts, with studies showing up to 40 times higher concentrations of vital nutrients.

Top **polyphenol-rich microgreens** include:

- Red cabbage
- Amaranth
- Radish
- Mustard
- Beet greens

Each offers unique health benefits, from potential **blood sugar regulation** to **appetite control** through T2R activation.

The Science Behind Polyphenols and Weight Loss

When you consume polyphenol-rich foods, you activate **T2R receptors** throughout your gastrointestinal tract.

This activation triggers the release of hormones like **GLP-1 and CCK**, which play essential roles in regulating your appetite and blood sugar levels.

The impact on metabolism includes:

- **Increased energy expenditure**: Boosting your metabolism
- **Enhanced fat oxidation**: Improving your body's ability to burn fat
- **Improved glucose tolerance**: Better regulation of blood sugar levels

These metabolic changes can contribute to **weight loss** and improved glucose tolerance, potentially reducing your risk of obesity and type 2 diabetes.

Polyphenols and Diabetes Management

Polyphenols play a crucial role in diabetes management through multiple mechanisms:

- **Effects on insulin sensitivity**: Polyphenols can significantly boost insulin sensitivity, combating insulin resistance through various pathways.
- **Glucose metabolism improvement**: These compounds regulate glucose absorption and boost insulin response, promoting metabolic flexibility.
- **Reduction of oxidative stress and inflammation**: Polyphenols effectively reduce oxidative stress and inflammation, bolstering your immune response and improving gut health.

By incorporating polyphenol-rich foods like microgreens into your diet, you're not only addressing diabetes but also potentially mitigating other chronic diseases associated with inflammation.

Incorporating Microgreens into Your Diet

Growing **microgreens** at home is easy and requires minimal space and equipment.

These nutrient-dense sprouts reach the harvest stage within 7-14 days, providing a quick and fresh source of polyphenols.

Creative ways to incorporate microgreens into your diet include:

- **Microgreen smoothies**: Blend with fruits and vegetables for a nutrient-packed drink
- **Salad toppers**: Add to salads for extra flavor and nutrition
- **Sandwich fillings**: Use in place of lettuce for a nutrient boost
- **Garnishes for soups and main dishes**: Enhance both nutritional value and visual appeal

Practical Tips for Maximizing Polyphenol Benefits

To maximize the benefits of polyphenols in your diet, you'll want to combine various sources, as different foods contain distinct **polyphenol profiles**.

To get the most out of polyphenols in your diet:

- **Combine different polyphenol sources**: This boosts their synergistic effects and improves absorption.
- **Use proper storage and preparation methods**: Store microgreens in airtight containers in the refrigerator and consume raw or lightly steamed to maintain polyphenol levels.
- **Maintain consistency in consumption**: Incorporate polyphenol-rich foods into your daily meal planning for optimal benefits.

Potential Considerations and Precautions

While polyphenols offer potential benefits for **diabetes management**, be aware of:

- **Interactions with medications**: Polyphenols may affect the effectiveness of certain diabetes medications.
- **Importance of a balanced diet**: Don't rely solely on polyphenol-rich foods for diabetes control.
- **Consulting with healthcare professionals**: Always consult your healthcare provider before making significant dietary changes, especially if managing a chronic condition like diabetes.

Wrap-up: Microgreens vs Diabetes

Microgreens and polyphenols show promising potential in fighting **obesity and diabetes** through their antioxidant properties and **T2R receptor** activation.

Incorporating these tiny powerhouses into your daily diet can support overall health, potentially improving **glucose metabolism** and appetite control.

The journey to better health is ongoing, so experiment with different microgreens to find what works best for you.

With consistency and mindful eating, harness these natural allies in your health journey.

By prioritizing these **nutrient-dense options**, you're taking proactive steps towards wellness.

Whether growing your own or trying new recipes, embrace the potential of microgreens.

Remember, it's about progress, not perfection – every microgreen-topped meal is a step towards a healthier you.

Research

Aly, A., Mohamed, S. M., Khattab, M. S., Ahmed, Abdel-Rahim, E. A., Ammar Al-Farga, Sarpong, F., & Faisal Aqlan. (2023). Clover microgreen incorporation in diet-controlled diabetes and counteracted aflatoxicosis of rats. Food Science & Nutrition, 11(12), 7605–7617. https://doi.org/10.1002/fsn3.3680

Aqeela Sehrish, Majeed, I., Eliasse Zongo, Ayub, H., Rasul, H., Muhammad Abdul Rahim, & Fahad AL-Asmari. (2023). A review on various extraction and detection methods of bio-functional components from microgreens: food applications and health properties. International Journal of Food Properties, 26(2), 3082–3105. https://doi.org/10.1080/10942912.2023.2272564

Ma, S., Tian, S., Sun, J., Pang, X., Hu, Q., Li, X., & Lu, Y. (2022). *Broccoli microgreens have hypoglycemic effect by improving blood lipid and inflammatory factors while modulating gut microbiota in mice with type 2 diabetes.* Journal of Food Biochemistry, 46(7), e14145. https://doi.org/10.1111/jfbc.14145

Marshall R, Nwabeke J, Haslund-Gourley BS, Huang C, Gaither T, Mishra V, Kim S, Xu H, Kean F, Rokni N, Gadegbeku A. Microgreens Nutrition Outreach: A Novel Tool for Community-Wide Dietary Disease Prevention. Transformative Medicine. 2023; 2(4):88-97. doi: https://doi.org/10.54299/tmed/qein4935.

Mohamed, S. M., Aly, A., Khattab, M. S., Abdel-Rahim, E. A., & Ammar Al-Farga. (2023). Pathological and biochemical evaluation of radish microgreen on diabetes and aflatoxicosis in rats. Environmental Science and Pollution Research, 30(43), 98389–98399. https://doi.org/10.1007/s11356-023-29334-7

Trina Ekawati Tallei, et al. "A Comprehensive Review on the Antioxidant Activities and Health Benefits of Microgreens: Current Insights and Future Perspectives." International Journal of Food Science & Technology, vol. 59, no. 1, 7 Nov. 2023, pp. 58–71, https://doi.org/10.1111/ijfs.16805.

Medical Disclaimer

The information provided in this article by Microgreens World and related materials is for educational purposes only and should not be considered medical advice. Always consult with a qualified healthcare professional before making any changes to your diet, lifestyle, or health regimen. The author and publisher are not responsible for any consequences resulting from the use of this information, and readers assume full responsibility for their actions based on it.

Transform Your Home into a Nutrient-Packed Superfood Haven

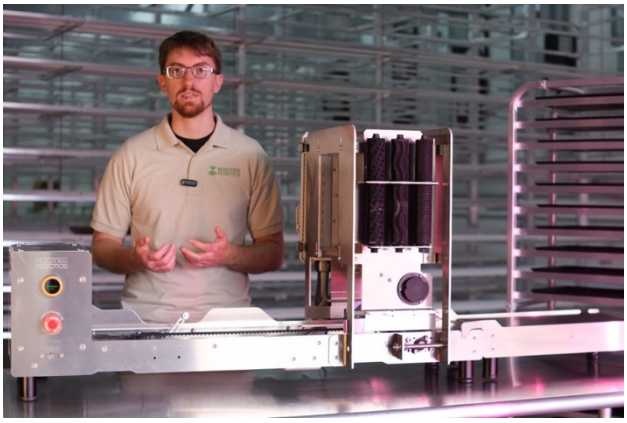
Your 9-Day Blueprint to Microgreen Mastery

GET THE BOOK!

MORE INFORMATION AT WWW.MICROGREENSWORLD.COM

Evidence-based Expertise

Unlocking the Future of Farming: Affordable Automation for Small Growers!



There is innovation everywhere, as are the ongoing efforts to make automation accessible for small- to medium-sized controlled environment agriculture (CEA) farms, particularly those focusing on microgreens.

Max Knight, co-founder of Rooted Robotics, emphasizes that traditional automation systems are often financially unfeasible for smaller operations.

The company aims to create affordable and customizable machinery, enabling small farmers to enjoy the benefits of automation without prohibitive costs.

Their products, such as a $7,000 microgreens seeding machine and a $25,000 leafy greens harvester, are designed for scalability, targeting farms that harvest between 100 to 1,500 pounds of produce weekly.

By ensuring ease of maintenance and adaptability for various crops,

Rooted Robotics seeks to enhance productivity and reduce labor costs for smaller farm operations.

The increasing demand for affordable automation in North America indicates a shift towards more inclusive innovation within the market, potentially allowing small microgreens farmers to

improve efficiency and profitability significantly.

This initiative could represent a turning point for smaller players in the vertical farming sector, enabling them to compete more effectively with more extensive operations through enhanced automation, ultimately leading to a more vibrant and diverse agricultural landscape.

Source: Boekhout, R. (2024, September 6). *US: Introducing affordable automation for small and mid-sized CEA farms.* http://www.verticalfarmdaily.com/article/9656570/us-introducing-affordable-automation-for-small-and-mid-sized-cea-farms/

Cultivation Techniques

Damping Off: Stop Losing Your Microgreens Now!

Damping off is a common, devastating fungal disease affecting microgreens, particularly during germination.

It is primarily caused by fungi such as Pythium, Fusarium, and Rhizoctonia, which thrive in moist and warm conditions.

This disease manifests as seedling collapse, especially noticeable at the soil line where excess moisture can lead to rot and blackening of tissues.

In just a few days, damping off can wipe out entire trays of seedlings, causing significant financial losses for growers as microgreens, being harvested at a young age, cannot recover from such setbacks.

Preventing damping off involves understanding its causes and managing environmental conditions effectively.

Key factors include excess moisture, poor air circulation, contaminated growing mediums, overcrowding, and inadequate temperatures.

Growers are encouraged to optimize watering practices, maintain airflow, use sterile materials, and avoid overcrowding to minimize risks.

Improving air circulation in microgreen growing can be achieved through several strategies.

First, incorporating fans into the growing environment can help to increase airflow and prevent stagnant conditions.

This proactive approach reduces humidity levels and helps to keep the growing surface dry, which is essential in preventing fungal issues like damping off.

Second, ensuring sufficient spacing between trays allows for better air movement; overcrowding often leads to high humidity and decreased airflow.

It's also beneficial to utilize materials that promote drainage in the growing medium, ensuring that excess water does not accumulate, as moist conditions further hinder air circulation.

Lastly, monitoring and maintaining ideal temperature and humidity levels in the growing area can enhance overall plant health and airflow.

One innovative solution is the use of Vegbed grow mats made from 100% bamboo.

These mats enhance drainage and promote better airflow, acting as a barrier against fungal contamination.

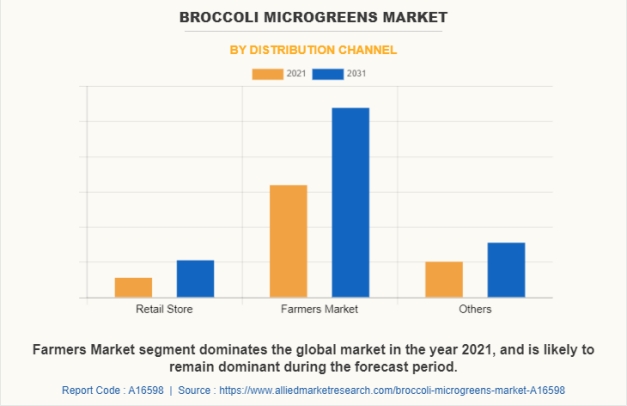
They are sterile and inert, which reduces the introduction of pathogens, while their composition retains moisture without fostering damping off.

Ultimately, early detection and proactive management strategies are critical in combating damping off, ensuring healthier microgreens, and successful growing outcomes.

Source: Lin, A. (2024, September 5). How to prevent damping off in microgreens. Vertical Farm Daily. http://www.vegbed.com/

Emerging Industry News

Broccoli Microgreens Market to Hit $398.5 Million



It is still a good time for small farmers to enter the broccoli microgreens market.

The global Broccoli Microgreens Market was valued at $237.2 million in 2021 and is projected to reach $398.5 million by 2031, with a compound annual growth rate (CAGR) of 5.5% from 2022 to 2031.

Broccoli microgreens are predominantly cultivated using indoor vertical and greenhouse farming methods, which require precise climatic conditions for optimal growth.

Rich in essential nutrients like magnesium, manganese, and antioxidants, broccoli microgreens offer significant health benefits, making them popular among health-conscious consumers.

The increasing awareness of their nutritional value and the trend toward urban gardening, such as rooftop and vertical farming, further support market growth.

Microgreens Market Report Scope

Report Attribute	Details
Market Size Value In 2024	$2.14 billion
Revenue Forecast In 2033	$3.46 billion
Growth Rate	CAGR of 12.8% from 2024 to 2033
Base Year For Estimation	2023
Actual Estimates/Historical Data	2018-2023
Forecast Period	2024 - 2028 - 2033
Market Representation	Revenue in USD Billion and CAGR from 2024 to 2033
Segments Covered	1) By Type: Broccoli, Cabbage, Cauliflower, Arugula, Peas, Basil, Radish, Cress, Other Types 2) By Category: Organic, Conventional 3) By Farming Method: Indoor Vertical Farming, Commercial Greenhouse, Other Farming 4) By End User: Retail, Food Service, Other End-users
Regional Scope	Asia-Pacific; Western Europe; Eastern Europe; North America; South America; Middle East; Africa
Country Scope	The countries covered in the report are Australia, Brazil, China, France, Germany, India, Indonesia, Japan, Russia, South Korea, UK, USA, Canada, Italy, Spain. Additional countries that can be covered in the report for an additional fee: Bangladesh, Thailand, Vietnam, Malaysia, Singapore, Philippines, Hong Kong, New Zealand, Mexico, Chile, Argentina, Colombia, Peru, Austria, Belgium, Denmark, Finland, Ireland, Netherlands, Norway, Portugal, Sweden, Switzerland, Czech Republic, Poland, Romania, Ukraine, Saudi Arabia, Israel, Iran, Turkey, UAE, Egypt, Nigeria, South Africa.
Key Companies Profiled	AeroFarms LLC; Goodleaf Farms; Living Earth Farm; Fresh Origins; Gotham Greens; Bowery Farming Inc.; Charlie's Produce (Farmbox Greens LLC); Madar Farms; Metro Microgreens; The Chef's Garden Inc.; Koppert Cress USA; Pacific Coast Greens; Great Lakes Growers; Florida Microgreens; Farm.One; BrightFarms; Plenty; Bright Agrotech; Edenworks; Green Sense Farms; Local Roots Farms; Lufa Farms; Square Roots; Urban Oasis; Urban Produce; Vertical Harvest; Zip Grow; Infinite Harvest; Harvest Urban Farms
Customization Scope	Request for Sample
Pricing And Purchase Options	Explore Purchase Options

The Microgreens Global Market Report for 2024 provides an analysis of the microgreens market, predicting growth from $1.91 billion in 2023 to $2.14 billion in 2024, with a CAGR of 12.2%.

The market consists of microgreens like broccoli, cabbage, and basil, categorized into organic and conventional.

Key factors driving growth include the rise in demand for organic foods, increased consumer awareness, and adoption of urban agriculture.

Innovative farming methods, such as indoor vertical farming, enhance production efficiency.

The market is expected to reach $3.46 billion by 2028, reflecting a growing trend toward sustainable and nutrient-dense food options.

The broccoli microgreens market is segmented by end-user (residential and commercial), farming methods (indoor, greenhouse), and distribution channels (retail, farmers' markets).

Europe led the market in 2021 due to a rise in health-focused

eateries and urban agriculture initiatives.

However, high cultivation costs and limited consumer awareness pose challenges.

Despite those, the market is poised for growth fueled by dietary shifts towards healthier food options.

Source: Chauhan, S., & Deshmukh, R. (2023). Broccoli microgreens market: Global opportunity analysis and industry forecast, 2022-2031. Allied Market Research. Retrieved from https://www.alliedmarketresearch.com/broccoli-microgreens-market/purchase-options

Aerofarms goes nationwide at Amazon Fresh stores

Amazon is expanding its partnership with AeroFarms, an indoor vertical farming company, at its Amazon Fresh stores.

AeroFarms grows crops year-round without pesticides and uses 95% less water than traditional farming.

The company's microgreens, including Micro Spicy Mix, Micro Arugula, and Micro Rainbow Mix, will be available at Amazon Fresh locations.

AeroFarms claims to be the No. 1 U.S. microgreens retail brand and is also found at other grocers like Walmart and HEB.

AeroFarms has grown over 550 varieties of plants since its formation.

The company grows greens and other produce at its indoor grow facilities year-round without pesticides.

It utilizes approximately 95% less water relative to typical farming methods.

Source: Inklebarger, Timothy, Editor. (2023 May 16). Aerofarms goes nationwide at Amazon Fresh stores. https://www.supermarketnews.com/fresh-produce/aerofarms-goes-nationwide-at-amazon-fresh-stores

Commercial Best Practices

How One Startup in Denmark Disrupted Vertical Farming for Restaurants!

Nordic Hydro, a Danish startup, has carved a successful niche in the microgreens market by pivoting from selling hydroponic systems to directly supplying high-quality microgreens to restaurants.

Co-founders Anders Lunden Gydesen and Hjalmar began their journey growing microgreens in their dorm room.

They shifted their business model after discovering a higher demand for the products rather than the systems.

They focus on delivering consistent and high-quality produce to build customer loyalty.

Understanding the economic viability of specific crops is crucial, as vertical farms can produce many things.

Yet, profitability often hinges on growing items like salads, herbs, and microgreens.

The company has expanded its operations by partnering with local entrepreneurs abroad.

It has initiated a global mentorship program, offering guidance to aspiring microgreens farmers.

This program provides comprehensive training/support from crop cultivation to market

entry, ensuring participants can transform their agricultural endeavors into successful businesses.

Nordic Hydro offers substantial support to new farmers through its global mentorship program, which is explicitly aimed at microgreen production.

> This is one of the keys to startup survival.

This program provides participants with a structured approach that includes comprehensive video content and personalized one-on-one coaching.

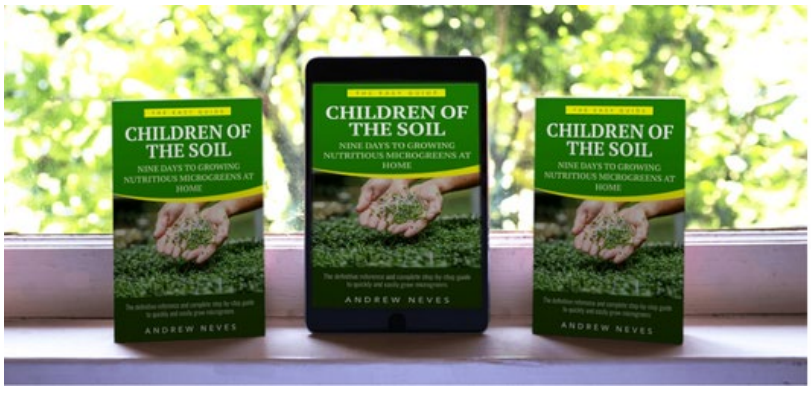
New farmers can learn about the entire farming process, from establishing a stable foundation to navigating the complexities of the hospitality sector, which enhances their chances of success.

The mentorship is designed for both beginners and more experienced growers looking to refine their business strategies.

Additionally, the knowledge gained is based on Nordic Hydro's extensive experience in the markets where it has successfully scaled operations, ensuring that participants can learn from the mistakes made by the founders.

Their achievements are linked to establishing their farm and mentoring others to replicate their success in various markets globally.

Source: Boekhout, R. (2024, September 2). Denmark: "We're profitable now, but success in our field requires much more than just growing." VerticalFarmDaily.com. https://www.VerticalFarmDaily.com



Transform Your Home into a Nutrient-Packed Superfood Haven

Your 9-Day Blueprint to Microgreen Mastery

GET THE BOOK!

MORE INFORMATION AT WWW.MICROGREENSWORLD.COM

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

Publisher: Microgreens World

Editor: D. Andrew Neves, andrew.neves@microgreensworld.com

Advertising: marketing@microgrenworld.com

Guest Posting: marketing@microgrenworld.com