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THE MICROGREENS WEEKLY

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

Women's History Month: Wonder Women Who Revolutionized Agriculture

This Week: Monday, March 11, 2024

The FDA Eliminates PFAS in "Grease-Proofed" Packaging

The US FDA's ruling on the nationwide end of PFAS in grease-proofed food packaging affects any form of packaging used for microgreens that has been treated with PFAS to achieve grease resistance.

This includes a variety of packaging types that might be used in the microgreens industry, such as:

- **Plastic Containers**: Often used for packaging

microgreens, these containers might have grease-proof coatings to prevent oil or moisture from the product from seeping through.

- **Wrappers and Liners**: Thin materials used to wrap or line microgreen packaging could be treated with PFAS for grease-proofing purposes.
- **Paper and Cardboard Packaging**: Boxes, cartons, or any paper-based packaging that is designed to be resistant to moisture and grease could be impacted if they were treated with PFAS-containing materials.

It is important to note that not all packaging materials in these categories necessarily contain PFAS.

The ruling targets explicitly those materials that have been treated with PFAS for grease-proofing.

> Growers and distributors of microgreens that utilize packaging materials falling into these categories should verify with their suppliers to ensure that their packaging complies with the new FDA regulations.

Microgreens growers and suppliers should consider transitioning to alternative packaging materials that do not contain PFAS, such as those made from biodegradable, compostable, or recyclable materials that have natural grease resistance or use non-PFAS based treatments for grease proofing.

This transition not only complies with the FDA's regulations but also aligns with growing consumer demand for environmentally friendly and health-safe packaging options. US FDA Announcement

80 Acres Farm Growing Microgreens Is Impressive

One of the country's largest vertical farming companies, based in Hamilton, Ohio, USA, continues to expand operations.

"We had set the bar high with our greens, with our tomatoes, our herbs, and our **microgreens**. Everything that we release has to be as good as our tomatoes, and those are the best tomatoes," said Mike Zelkind, CEO of 80 Acres Farms.

While new produce products won't be coming for a while, they will have some new salad kits coming out as they have exceeded projections "by a lot."

There will also be a **new farm in Georgia in 2025**, and they're already planning for an interior expansion of the Florence farm.

"Demand is not the issue," said Joe Portman, 80 Acres spokesperson. "We're doing everything we can do to keep up. The only way we can meet demand is to keep building."

Way into the future is how Infinite Acres, a wholly owned 80 Acres Farms subsidiary run by Tisha Livingston, a co-founder of 80 Acres, will play a role in the indoor farming industry, which includes greenhouses as well as vertical farms.

Infinite Acres designs and builds the company's products and is responsible for its loop operating system, which is the software, hardware, and control

platforms that their farms run on.

The products produced by 80 Acres Farms are 99% human-free in their grow zones, and they don't need to wash their produce because they're "growing the cleanest produce that's ever been grown. It's not only that vertically farm produce is cleaner. It's our farm, especially, that is cleaner." Butler County, Ohio, Journal News 2024-03-03

Canada Microgreens Market Flourishes: $168.6M by 2028

The microgreens sector in Canada has experienced substantial expansion over recent years, with its market value increasing from $99.3 million in 2019 to an estimated $168.6 million by 2028, demonstrating a solid compound annual growth rate (CAGR) of 10.9%. Among the various types of microgreens grown, broccoli has become the most prominent, leading the market in terms of sales.

> Broccoli microgreens are rich in essential vitamins and minerals. They can be harvested just 10–14 days after planting.

The popularity of broccoli microgreens is mainly due to their unique taste—a combination of a tangy flavor, slightly peppery smell, and crunchy texture. This makes them a flexible ingredient for numerous dishes, including tofu scrambles, salads, sandwiches, and soups. This contributes to

their increasing demand in the Canadian market.

Despite this positive outlook, microgreen cultivation faces challenges, especially concerning the initial financial investment. Establishing indoor vertical farms requires significant funds for equipment, lighting, and climate control technologies, creating a hurdle for new entrants.

Nevertheless, major companies such as AeroFarms, Bowery Farming Inc., and Gotham Greens are set to influence the direction of the Canadian microgreens industry significantly. Allied Research 2024-03-05

Microgreens Entrepreneurship at the 11th University Fair in the Philippines

James Yamzon, a student pursuing a B.S. in Entrepreneurship at the University of St. La Salle in the Philippines, showcased his class' microgreens composed of wheat grass, radish, arugula, and red amaranth as well as succulents that were all sold at the 11th Agribiz Trade Fair.

Everything found in their booth was grown and harvested by Yamzon and his fellow Agribiz students, who are all hands-on on the farm. They also sell succulents.

Microgreen cultivation in the Philippines is an emerging sector within its agricultural landscape, reflecting a growing interest in sustainable and urban farming practices.

This interest is driven by the increasing awareness of the nutritional benefits of microgreens, coupled with the demand for fresh, locally sourced produce in urban areas.

However, the development of the microgreens industry in the Philippines faces challenges, such as limited awareness about the benefits of microgreens among the broader population, the need for education on cultivation techniques, and access to affordable growing systems and supplies.

Moreover, there's an opportunity for local agricultural research institutions to explore optimized growing methods tailored to the Philippine climate and to support growers through education and resources.

Despite these hurdles, the potential for microgreens cultivation in the Philippines is significant, given the country's interest in health and wellness trends and the increasing demand for locally grown, sustainable food options.

As awareness grows and infrastructure improves, the microgreens sector is poised for further expansion, contributing to the diversification and resilience of the Philippine agricultural industry. The Visayan Daily Start, Phillipines 2024-03-06

Featured Article

In the United States, women constitute 31 percent of the farming population, managing over 300 million acres of land, which contributes $12.9 billion to the economy.

Women's History Month, observed in March, traces its origins to the inaugural National Women's Day celebrated on February 29, 1909, in New York. In honor of this month, let us recognize and appreciate the influential women who have profoundly impacted our agricultural practices and **our appreciation for farming.**

Mary Engle Pennington • 1872-1952 • Food Scientist • American

At the young age of twelve, Mary Engle Pennington's interest in science was sparked by a medical chemistry book. This early curiosity led her to pursue studies in chemistry and biology at the University of Pennsylvania Towne Scientific School.

During that era, Pennington was awarded only a certificate of proficiency, as female students were not eligible for degrees.

However, she overcame these barriers and obtained her Ph.D. from the same institution by the age of 22.

> Within a year of completing her Ph.D., Pennington was appointed as the chief of the Food Research Laboratory, becoming the FDA's first female laboratory chief.

Under her leadership, her team established pioneering standards for chicken processing safety and procedures to prevent the spoilage of fresh foods and bacterial contamination in milk.

Renowned for her contributions to food preservation and refrigeration, Pennington held patents for several inventions, including a rack for cooling poultry, a container for sterile food products, and a method for treating eggs to extend their freshness. Women Who Revolutionized Agriculture, Part 1

Maria Isabel Andrade • 1958-Present • Plant Breeder • Cape Verdean (African)

Despite her parents' limited formal education, Maria Isabel Andrade was encouraged to pursue her academic interests, underlining the value they placed on learning.

Before her recognition by USAID, Andrade worked as a high school teacher, which led to her opportunity to study in the United States. She was awarded the African American Institute Scholarship to pursue agronomy at the University of Arizona, where she completed her Bachelor's and Master's degrees in plant genetics.

With further support from USAID, **she obtained her Ph.D. in Plant Breeding and Physiology from North Carolina State University.**

Dr. Andrade's groundbreaking work commenced at the International Institute for Tropical Agriculture (IITA) in Mozambique, where she served as the regional agronomist for cassava and sweet potato. Her tenure at IITA saw the release of nine drought-resistant cassava varieties that were distributed among Mozambican farmers. Additionally, Andrade spearheaded a five-year initiative that enabled over a million farmers to access high-yielding cassava and sweet potato planting materials.

In 2006, Dr. Andrade moved to the International Potato Center (CIP), where she directed the Sweet Potato Action for Security and Health in Africa initiative. Collaborating with plant breeders across the

continent, she focused on developing drought-resistant sweet potato varieties.

> Within three years, Dr. Andrade's team introduced 41 new varieties, including 30 pro-vitamin A, orange-fleshed types and 20 drought-resistant ones.

These top-performing varieties reached 123,000 households, and drought-resistant strains were embraced by half a million farmers. Wonder Women of Agriculture

Fannie Lou Hamer • 1918-1977 • Plant Breeder • American

In 1969, Fannie Lou Hamer established the Freedom Farm Cooperative (FFC), acquiring significant land in the Mississippi Delta to support impoverished African American farmers and sharecroppers who had historically been disenfranchised by white landowners.

The cooperative expanded to encompass over 640 acres, showcasing the potential for prosperity within the African American farming community through unified efforts.

The cooperative promoted crop-sharing, autonomy, and economic self-sufficiency. It introduced an innovative program where families received a piglet to rear.

> This initiative marked one of the initial instances of community gardening and laid the groundwork for the contemporary food justice movement.

FANNIE LOU HAMER: UNTIL EVERYBODY'S FREE. ART BY SANGODARE & ALEXIS

Once the piglet reached maturity, it was returned to mate, and the cooperative was given two piglets from each litter to sustain the initiative. Hamer believed, "If you have a pig in your backyard, if you have some vegetables in your garden, you can feed yourself and your family, and nobody can push you around."

Through the FFC, Fannie Lou Hamer significantly influenced American agricultural practices, championing the principles of independence, communal support, and the right to food security and justice. Cornell University, College of Agriculture and Life Sciences

The Microgreens Grow Kit Small Enough To Fit in your Palm

Designer: House of Thol

Small enough to fit in both your palms, the Patella Crescenda makes growing greens ridiculously easy and quick.

The unique shape of the planter allows it to water itself, so you don't need to, and it helps you grow seeds without any soil, yielding microgreens in just about a week.

The Patella Crescenda is intuitive, fun to use, and made to be reusable, so you can have a constant supply of microgreens for your salads, canapes, and smoothies.

The Patella Crescenda comes together with just four simple parts – a base tray, two reusable steel seed plates, and a water bulb that fits on top.

Fill the bulb with water and place it upturned into the base. An air vacuum inside helps deploy the water slowly, filling up the base tray. YankoDesign, 2024-03-04

Urban Roots Farms: Valley-Grown Microgreens

Former physical therapist Robb Blackaby became interested in growing microgreens after learning about their potential health benefits.

Along with partners Warren Griffith and Ryan Keely, he

subsequently co-founded Urban Roots Farms, a sustainable indoor farm in the Scottsdale, Arizona, Airpark specializing in microgreens – young vegetable and herb seedlings with concentrated flavors and vibrant colors.

> Customer favorites include broccoli, arugula, and cilantro, as well as the Mighty Greens Medley.

This microgreen salad features a bright blend of peas, sunflowers, radishes, and kale.

Customers often sprinkle the nutrient-dense seedlings over eggs, soup, and pasta, Blackaby says.

Urban Roots Farms greens are a staple at Eat Clean Phx organic meal delivery service. They are served locally at Valley restaurants Arboleda and Tryst. They're also available for Airpark pickup. Urban Roots Farms

Babylon Micro-Farms Named in TIME's List of Top GreenTech Companies for 2024

Babylon Micro-Farms, a participant in the Batten Institute for Entrepreneurship, Innovation, and Technology's iLab Incubator in the University of Virginia Darden School of Business, has been named to the TIME Top GreenTech Companies in America list for 2024.

While farm-to-table is pervasive in the food sector and indoor farming isn't a new concept,

Babylon's approach of placing a farm on site that is automated and managed remotely is novel.

The company founders, UVA alumni Alexander Olesen and Graham Smith, started out with one goal: to bring the benefits of sustainable hydroponic farming to anyone who needed it.

> This fall, the company will start shipping its STEM Garden, which will provide hands-on learning about hydroponic farming to K-12 classrooms.

Today, the company's stated mission is to "grow the world's largest network of distributed indoor farms so people get closer to their food." Bringing the farm inside also provides a unique opportunity for food education. [UVA Darden, 2024-03-07]

Collard Microgreens Anyone?

Collard greens, recognized for their dense foliage and rich, earthy taste, serve as both a culinary favorite and a nutritionally dense food.

Collard greens are a prime example of the beneficial "green leafy vegetables" frequently recommended for a healthy diet that offers a plant-based source of calcium, presenting an alternative to dairy products.

Collard greens belong to the cruciferous vegetable family, or "brassica," along with broccoli, cauliflower, bok choy, Brussels sprouts, and radishes.

One notable compound found in collards and other brassicas is **sulforaphane**, recognized for its potential to reduce inflammation, aid in hormone balance, and offer protection against chronic illnesses.

Sulforaphane is also available in supplement form, such as Broccoli Booster, which I personally use. **More About Collard Greens**

Unlocking New Markets & Building Customer Trust: Certification with CNG

Are you thinking of getting certified but unsure how to get started? Which certifications to choose? What's involved in the process?

Mar 19, 2024, 01:00 PM EST

In the upcoming webinar with Certified Naturally Grown, we sit down with Keegan to learn more about their peer-reviewed certification for farmers producing food, flowers, and fiber for their local communities.

This webinar will cover the following:

- What are the differences and similarities between CNG and USDA Organic?
- How does the peer review inspection process work?
- Which CNG standards are most commonly confused?

And there will be a live Q&A session to answer any questions you may have about CNG! **Register**

High-value Crops are the Future of Vertical Farms

Microgreens are one of South Dakota's unique year-round crops. Celebrate these edible seedlings at the upcoming Mighty Microgreens Superfood Event with Dakota Fresh Food Hub.

This farmer-owned collective markets and distributes local foods in Southeast South Dakota. Sanaa's Gourmet Mediterranean restaurant in Sioux Falls will host the event on **Friday, March 15, 2024, from 10 AM to 3 PM**.

This 'Fresher is Fun' event is the fifth of eight retail events in the state promoting the purchasing of South Dakota-grown specialty crops. Specialty crops include fresh produce and other products like jellies, pickles, honey, nuts, flowers, and more.

The free festival will take place at 401 E. 8th St., Unit 100 in Sioux Falls (8th and Railroad). Attendees can look forward to sampling microgreens, including broccoli, radish, onion, corn, and sunflower. Sanaa's will provide a small appetizer utilizing micros.

Morning AgClips, 2024-02-25

Learn all the essential aspects of growing microgreens successfully in a hydroponic environment online!

Instructor: M.S. Karla Garcia

Master in Plant Sciences from The University of Arizona CEO at Microgreens FLN

Hort America [2024-03-16]

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