

MICROGREENS WEEKLY DIGEST

Nutrition | Science | News

TUESDAY, 30 SEPTEMBER 2025

VOL 2025 No.34



WHAT YOU MISSED THIS WEEK

Scientists discovered something remarkable hiding in Ethiopian kale microgreens—**compounds that target prostate cancer cells while leaving healthy tissue untouched**. The selectivity results rival conventional treatments, and safety tests showed zero toxicity in 28-day animal studies.

Closer to home, researchers cracked the code on growing stronger microgreens. Soil mixed with compost beat tissue paper, foam, and plain soil across the board. Germination jumped to 87-97%, plants grew taller, and harvests got heavier.

Meanwhile, Rocket Farms made a big bet on automation, entering the microgreens market with their 7.5 million square feet of California greenhouse space.

In Tokyo, Kohei Murata sells mizuna microgreens for \$80 per kilo—nearly triple what baby greens fetch—by growing in soil instead of hydroponics.

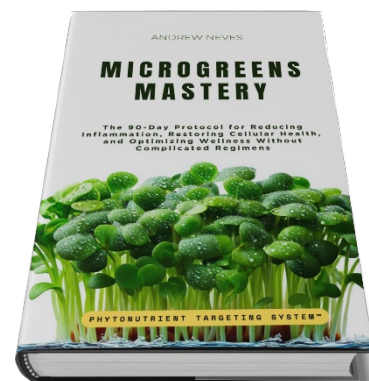
Your kitchen can become a micro-farm too. The Vineyard Hotel in Cape Town turns morning juice scraps into earthworm compost, feeding trays of fresh microgreens steps from their kitchen.

Why wait another day?

THE HIGHLIGHTS

- Ethiopian kale microgreens show cancer-fighting properties
- Soil-compost mix beats other growing mediums
- Rocket Farms automates into \$3 billion market
- Japan grower sells microgreens for \$80/kilo

MICROGREENS MASTERY



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

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NUTRITION SCIENCE

Ethiopian Kale Microgreens Show Powerful Cancer-Fighting Properties in Groundbreaking Study

Scientists have uncovered something remarkable hiding in those tiny green shoots sprouting on your windowsill. A recent breakthrough study reveals that *Brassica carinata* microgreens—commonly known as Ethiopian kale—possess extraordinary cancer-fighting compounds that could reshape how we think about food as medicine.

Researchers at the Pan African University took these humble microgreens and discovered they could create silver nanoparticles with devastating effects against prostate cancer cells. But here's what matters most: the microgreens themselves are the powerhouse source of these protective compounds.

The results paint an extraordinary picture. When tested against DU-145 prostate cancer cells, the Ethiopian kale microgreens demonstrated selective targeting that outperformed many conventional approaches. Think of it like a precise surgical strike—these compounds attacked cancer cells while leaving healthy cells largely untouched. The selectivity index, which measures how well a treatment distinguishes between healthy and cancerous cells, showed promising results compared to standard chemotherapy drugs.

What makes this discovery particularly fascinating is how these microgreens work their magic. The study revealed multiple mechanisms of action, like a well-coordinated defense system. [The compounds triggered what scientists call "cell cycle arrest"—essentially forcing cancer cells to stop dividing and reproducing.](#) Simultaneously, they activated cellular suicide pathways, causing cancer cells to eliminate themselves through a process called apoptosis.

The research team didn't stop there. They examined the genetic fingerprint of treated cancer cells and found something remarkable: the microgreens' compounds turned down the volume on genes that promote cancer growth while amplifying those that fight it. Genes like p53, often called the "guardian of the genome," were significantly activated.

Safety testing in laboratory animals over 28 days revealed no toxic effects, even at high doses.



The rats maintained normal weight, organ function, and blood chemistry throughout the study period. This suggests these microgreens' beneficial compounds work without the harsh side effects often associated with traditional cancer treatments.

Brassica carinata belongs to the same family as broccoli, kale, and Brussels sprouts—all known for their health-promoting properties. However, the microgreen form concentrates these beneficial compounds into a nutritional powerhouse. Previous research has shown microgreens can contain up to 40 times more nutrients than their mature counterparts.

The study's lead author, Dogfounianalo Somda, and his team documented how the microgreens' natural compounds—including glucosinolates, flavonoids, and phenolic acids—work synergistically to create these protective effects. When processed into nanoparticles, these compounds became even more potent, suggesting the raw microgreens themselves harbor significant potential.

[Before you start planning your cancer prevention strategy around microgreens, we need human clinical trials to validate these laboratory findings.](#) However, the preliminary evidence offers genuine hope for natural approaches to supporting health and potentially preventing disease.

The beauty of this research lies in its accessibility. Ethiopian kale microgreens can be grown easily at home using basic hydroponic setups or even simple soil trays.

Seeds germinate quickly, typically ready for harvest within 7-10 days. Unlike exotic superfoods that require global shipping, these microgreens can sprout right on your kitchen counter.

This study represents more than just another laboratory discovery—it validates what many have long suspected about the power of fresh, living foods.

The concentrated nutrition in microgreens offers a practical way to boost your intake of protective compounds daily.

Your Next Steps

The implications extend beyond individual health choices. Supporting microgreens research could accelerate discoveries about natural cancer prevention and treatment.

Every windowsill garden contributes to a growing movement toward food-based medicine.

Start growing Ethiopian kale microgreens today. Your future self—and the advancement of natural health research—will thank you.

Sources: Somda, Dogfounianalo, Joel L. Bargul, Sabina Wangui Wachira, and John M. Wesonga. "In vitro antiproliferative effects of green synthesized silver nanoparticles from *Brassica carinata* microgreens on DU-145 prostate cancer cells and In vivo safety assessment." *Journal of Genetic Engineering and Biotechnology* 23 (2025): 100552.

HOME GROWING TIPS

Mix This For Better Microgreens

Researchers tested four growing setups for mustard, radish, and cabbage microgreens.

Soil mixed with compost beat everything else—tissue paper, foam, and plain soil.

Germination jumped to 87-97%, seedlings grew taller, and trays produced heavier harvests. The winning combo held water just right while letting roots breathe.

It also delivered nitrogen, phosphorus, and potassium at a 3:2:1 ratio—exactly what young plants crave. All four varieties packed serious nutrition: vitamin C, iron, zinc, and antioxidants that fight free radicals.

For your very next batch, try mixing equal parts potting soil and finished compost. You'll see stronger sprouts in days.

Then pick two new varieties you haven't tried growing yet.

WELCOME NEW MEMBERS

NAME	CITY	COUNTRY
Pablo Gleyson	Amparo	Brazil
Karen	Markham	Canada
Oscar Weck	Mocoa	Colombia
Anita Mobuse	Mumbai	India
Noor Mohammed	Bengaluru	India
Subodh	Pune	India
Geetha Dharmaraj	Chennai	India
Anand Bothra	New Delhi	India
Svetoch Ermatova	Bishkek	Kyrgyzstan
Hanna Dezentje	Amsterdam	Netherlands
Gerardo Daminar		Singapore
Charissa	Emalahleni	South Africa
Soni Clapes	Sabadell	Spain
Bobbi Benski	Phoenix	US
Daylene	Baltimore	USA
Marie Ehmehoff	Willmar	USA
Ann Cosgroves	Springfield	USA
Jana	Terre Haute	USA
Carol	Rocklin	USA
Gloria	Bensalem	USA



COMMUNITY CORNER



Rocket Farms Automates into Microgreens Gold

[Rocket Farms](#), a 70-year-old California grower, has entered the microgreens market with recent automation investments.

Operating across 7.5 million square feet of greenhouse space in Half Moon Bay, the company upgraded its potting and packing lines for microgreens, aligning with a market projected to grow from \$990 million in 2024 to \$3 billion by 2035 (Gutierrez 2025).

Their pressurized greenhouses maximize sunlight and retain heat, enabling year-round production with low energy costs, while automation reduces labor needs during peak demand from restaurants and retailers.

The infrastructure for their Living Herbs line, launching summer 2025, supports microgreens production, using recyclable containers and identical handling systems for two-inch root balls. Senior VP Indiana Fischer highlighted microgreens' efficiency, delivering 40 times the nutrients of mature plants (Fischer 2025).

Rocket Farms' entry boosts category legitimacy, with their distribution network—spanning big box retail, grocery, and specialty stores—expanding microgreens' national reach. Their closed-loop irrigation and compostable packaging research offer scalable technology for smaller growers.

Led by Steven Chan and Indiana Fischer, Rocket Farms leverages decades of supply chain expertise, seamlessly applying their success with blooming plants to microgreens' fast cycles.

This investment signals strong institutional confidence in microgreens' commercial potential beyond niche markets.

Source: Fischer, Indiana. 2025. "Rocket Farms Launches Living Herbs Line." *Perishable News*, May 23. Gutierrez, Jon. 2025. "Grower Success Stories: Rocket Farms is Zooming." *Greenhouse Product News*, July.



Japan's \$80/Kilo Opportunity: Start Growing

Kohei Murata figured out something many overlook. His Tokyo-based [Edomae Herb](#) sells mizuna microgreens for \$80 per kilo—nearly three times what baby greens fetch. The growth cycle? Just 7 to 10 days compared to a month for larger leafy crops.

Here's what works. Murata grows in soil, not hydroponics. Hydroponic microgreens can taste watery, but soil-grown varieties develop intense, explosive flavors. Chefs notice. Restaurants and hotels buy 99% of his 200-kilo weekly production. The market positioning matters. Indoor soil-grown microgreens remain a niche in Japan—baby greens dominate consumer awareness.

This creates space for growers willing to target premium clients. Specialty stores like Isetan treat these products as luxury items, not commodities (Boekhout, 2025). Energy costs eat 7% of revenue, a challenge Murata addresses through yield optimization. Labor expenses in Tokyo keep rising, but local production eliminates massive import transport costs. Distribution partners deliver fresh product affordably.

The technical breakthrough came from growing shorter stems. Murata initially struggled with poor taste and excessive stem length. After consulting with Microgreens Consulting, he adjusted propagation blackout phases and lighting parameters. Crops now receive 14 hours of daily light, preventing stretch while maintaining quality.

His expansion strategy rejects large facilities. Small distributed farms preserve quality control and maintain direct relationships with buyers. No external funding was needed—just a bank loan and execution. The takeaway for commercial growers? Premium markets exist where relationships and taste outweigh volume.

Source: Boekhout, Rebekka. "Indoor Soil-Grown Produce Is Not Yet a Big Market in Japan, Especially for Microgreens." *HortiDaily*, January 15, 2025. <https://www.hortidaily.com/article/9767491/indoor-soil-grown-produce-is-not-yet-a-big-market-in-japan-especially-for-microgreens/>



Varina's Hydroponic Model: Start Growing Certified

[Nouveau Farms](#) operates a six-acre H-GAP-certified hydroponic operation in Varina, growing microgreens alongside lettuce and herbs. The certification matters. H-GAP (Harmonized Good Agricultural Practices) opens doors to wholesale accounts, food service contracts, and institutional buyers who won't touch uncertified produce.

Trevor and Kay Ferguson's approach shows what diversified revenue looks like. They're pairing their hydroponic farm with a wine operation and urban tasting room. The microgreens feed into their farm-to-table model while building relationships with local food banks and community programs.

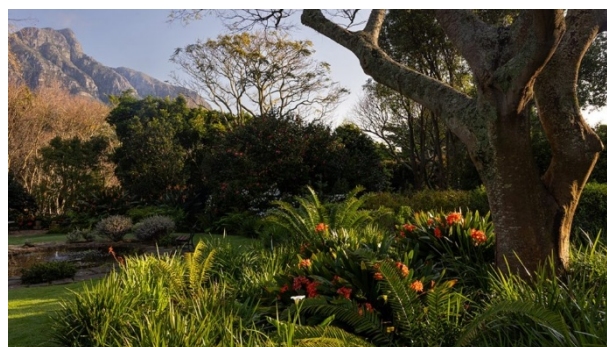
Hydroponics at this scale requires infrastructure. The Fergusons spent years navigating Henrico County zoning, licensing, and construction approvals. Their farm includes space for workshops and farm-to-table events—additional income streams beyond wholesale production.

The model demonstrates vertical integration. Growing microgreens and herbs for their own wine lounge creates a captive market. Surplus production flows to community channels and wholesale accounts. Local delivery and pickup infrastructure supports direct-to-consumer sales.

For commercial growers, three takeaways stand out. First, certification isn't optional if you want serious buyers. Second, diversification protects against single-crop risk. Third, owning your distribution—even partially—changes your margins.

The farm launches autumn 2026. Virginia's agricultural landscape keeps evolving, and operations like Nouveau Farms prove that hydroponic microgreens fit into larger farm business models.

Source: Style Weekly. (2025). Made in Varina. <https://www.styleweekly.com/made-in-varina/>.



Grow Restaurant-Quality Microgreens at Home Today

Kitchen scraps don't have to be trash. At [The Vineyard Hotel in Cape Town](#), peelings and pulp from morning juices get fed to earthworms.

Those worms turn waste into compost. That compost feeds trays of pea shoots and microgreens. Within days, chefs harvest nutrient-dense greens just steps from their kitchen.

You can do this too.

Head Chef Chad Blows puts it simply: "Get your hands dirty, understand where food comes from, and gain a whole new appreciation." He's right. Growing microgreens connects you to your food in ways grocery shopping never will.

The benefits stack up fast. You slash food miles to zero. No transport emissions. No wilted greens that sat in a truck for three days. You pick exactly when you need them, so nutrients stay locked in.

Research shows microgreens pack 4 to 20 times more vitamins than mature vegetables (Pinto et al., 2016).

The Vineyard's approach works for anyone—home growers testing windowsill trays, chefs wanting peak freshness, or commercial operations scaling up production.

The cycle is beautifully simple: compost feeds soil, soil feeds plants, plants feed you. It's a system that makes sense.

Start small. One tray. Radish or broccoli seeds work great for beginners. Add some quality compost. Mist daily. Harvest in 7-10 days. You'll taste the difference between something grown in your space versus something shipped across continents.

Your kitchen can become a micro-farm producing fresh greens year-round. The question is: why wait another day?

Source: Spring in the Gardens at The Vineyard Hotel. (2025, September). Cape Town Etc. <https://www.capetownetc.com/sponsored/spring-in-the-gardens-at-the-vineyard-hotel/>

CREATIVE RECIPES



Ethiopian Mustard's Journey

Ethiopian mustard took root in ancient Ethiopian highlands. It nourished early communities with its bold, zesty leaves.

Ages ago, farmers treasured this hardy plant for oil and hearty meals. They ground its seeds into cooking oil. That oil greased pans for injera.

Injera is Ethiopia's cherished flatbread. The leaves brimmed with anti-cancer and anti-diabetic compounds.

Those compounds spiced gomen stews. Picture collards with a feisty twist. By medieval times, it fueled diets across the Horn of Africa. It blended sweet-spicy flavors into daily fare.

Traders shared its seeds with distant lands. It stayed a local gem. It rarely graced tables beyond Africa. Today, its nutrient-rich greens light up urban markets. They stir fresh intrigue among cooks and eaters.

Ever wonder what sustained ancient farmers' strength through tough seasons?

This unassuming plant carries flavorful, enduring secrets worth savoring slowly.



Addis Greens: Fire-Kissed Gomen with Double Mustard Power

Three years back, I sat in a tiny Oakland restaurant. The owner, Rahel, slid a platter of gomen in front of me. Dark, glossy greens. Steam rising.

One bite changed everything. The familiar earthiness hit first—collards, garlic, berbere spice. Then came a second wave. Peppery. Bright. Almost radish-like.

"Ethiopian mustard microgreens," she said. "My grandmother used the mature leaves. I use both now."

Traditional gomen dates back centuries across the Horn of Africa. Farmers cooked mature mustard greens with spiced butter and aromatics.

This version honors that tradition but amplifies it. You get two textures, two flavor profiles, and double the health benefits in one bowl.

1

Recipe Information

Prep Time: 20 minutes

Cook Time: 35 minutes

Category: Main Course

Method: Stovetop braising

Cuisine: Ethiopian (Modern Adaptation)

Yield: 4 servings



2

Ingredients

For the Base

- 1 pound mature Ethiopian mustard greens (or collard greens), stems removed, roughly chopped
- 3 tablespoons niter kibbeh (Ethiopian spiced butter) or ghee
- 1 large red onion, finely diced
- 4 garlic cloves, minced
- 1 tablespoon fresh ginger, minced
- 2 teaspoons berbere spice blend (moderate heat version)
- 1/2 teaspoon ground cardamom
- 1/2 teaspoon ground fenugreek
- 1 cup vegetable broth
- 2 tablespoons tomato paste
- Salt to taste
- Fresh lime juice (1 lime)

For the Microgreens Layer:

- 3 cups Ethiopian mustard microgreens (about 3 ounces), loosely packed
- 1 cup reserved fresh microgreens for garnish
- 1 tablespoon niter kibbeh

Optional Protein Additions:

- 1 cup cooked lentils (green or brown)
- 8 ounces firm tofu, cubed and pan-fried
- 6 hard-boiled eggs, halved

To Serve:

- Injera (Ethiopian flatbread)
- Extra microgreens for topping

3

Preparation

Step 1: Prep Your Greens

1. Wash the mature mustard greens three times. Grit loves to hide in those crinkled leaves. Remove tough stems. Chop into bite-sized pieces.
2. Pat the microgreens dry gently with a towel—they're delicate. Set aside.

Step 2: Build the Flavor Foundation

3. Heat a large, heavy-bottomed pot over medium heat. Add the niter kibbeh. Let it melt and shimmer.
4. Toss in the diced onion. Cook for 8 minutes, stirring occasionally. You want them soft and translucent, not browned.

3

Preparation (Cont'd)

5. Add garlic and ginger. Stir constantly for 90 seconds. Your kitchen should smell incredible right now.

Step 3: Add the Spices

6. Sprinkle in the berbere, cardamom, and fenugreek. Stir for 30 seconds. This toasts the spices and wakes up their oils. Don't skip this step—it makes the difference between flat and phenomenal.

Step 4: Cook the Mature Greens

7. Add the tomato paste. Stir it into the onion mixture until everything's coated. Pile in the chopped mature greens. They'll look like way too much. Don't worry. They shrink dramatically.
8. Pour in the vegetable broth. Stir everything together. The greens will start wilting almost immediately.
9. Cover the pot. Reduce heat to medium-low. Let it simmer for 25 minutes. Stir every 8-10 minutes. The greens should turn very tender. The liquid should reduce to a thick, glossy sauce. Taste. Add salt as needed.

Step 5: Wilt the Microgreens

10. This is where the magic happens. Add 3 cups of microgreens to the pot. Drizzle with 1 tablespoon of niter kibbeh. Stir gently for 60-90 seconds. The heat from the mature greens will wilt them just enough. They'll keep their bright green color and most of their nutrients. Squeeze lime juice over everything. Stir once more.

Optional: Add Your Protein

11. Fold in cooked lentils now if using. Or nestle pan-fried tofu cubes into the greens. Hard-boiled eggs go on at plating.

4

Benefits of Wheatgrass Microgreens for Health

Ethiopian mustard microgreens pack concentrated nutrition.

They contain sulforaphane, which activates your body's antioxidant systems. The glucosinolates help tame inflammation.

These greens support blood sugar regulation and digestive health. You're also getting vitamins C, K, and E, plus folate, calcium, and iron.

The real benefit? You can grow these in 10 days on your counter. Fresh nutrients whenever you want them.

I keep three trays rotating in my kitchen. Harvest one, start another.

IN THE NEWS

Reclaim Your Vitality

My mother-in-law's cholesterol numbers shocked me three years ago. High LDL, climbing weight, energy gone. Sound familiar?

Here's what changed everything: researchers at the University of Toronto tracked over 8,000 adults past 60 who weren't in optimal health. Within three years, nearly one in four had completely turned things around.[1]

The formula? Physical activity, solid sleep, no smoking, and managing chronic conditions like diabetes or osteoporosis. But here's the part that grabbed me—diet played a massive role.

You don't need expensive interventions or spa treatments. Good nutrition does the heavy lifting. And when I say good nutrition, I mean nutrient density that counts. Microgreens deliver 4 to 20 times more vitamins and minerals than their mature counterparts. Broccoli microgreens? Packed with sulforaphane for cellular health. Radish microgreens? Vitamin C powerhouse.

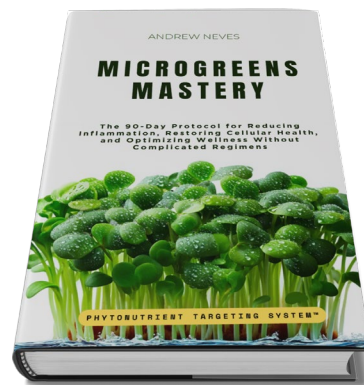
The study found something else: people with baseline emotional wellness were five times more likely to hit optimal well-being. Your mental game matters as much as your plate.

Here's the clock ticking—three years. That's your window. You can sit on the couch today or start building resilience now.

Want the full roadmap? Our bookstore has guides on growing nutrient-dense food at home, no fluff:

<https://microgreensworld.com/microgreens-resources/books/>

Source: Mabel Ho et al., "Who regains 'optimal well-being' amongst middle-aged and older Canadians? Findings from a population-based longitudinal study," *PLoS One* (2024).



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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