

CATEGORY: HORTICULTURAL PRACTICES IMPACTING HEALTH

Plant-Based Businesses

“Business innovations continue to emerge within the horticultural and agricultural fields, for processes and products that provide edible and ornamental plants appealing to consumers interested in healthier lifestyle choices including plant-based alternative foods, availability (and techniques to hasten maturity) of fruit, and use of refurbished shipping containers for hydroponic plant production for example (Innovacorp, 2018; Very Local Greens, n.d.)” (Fleming, 2021). Innovations are being developed by start-ups, social enterprises, and business ventures that are committed to improving food access, interested in the exploding plant-based food sector, and the plant-based movement. Another facet of plant-based businesses are those that provide services, for example, marketplace platforms and interiorscaping, which are also seeing rapid growth. Plant-based products are now considered to be a key driver of sales growth at grocery retailers nationwide in the U.S., growing almost twice as fast as overall food sales in this \$7 billion market (Good Food Institute, 2021). “Covid-19 pandemic fueled massive growth in the green industry” (Beeson, 2020). Innovations like urban farms growing in moveable containers, improvements to vertical farming, plant-based menthol cigarettes, and herbal natural alternatives from backyard gardens for hair care suggest the wide scope of plant-based businesses. Newer terms are appearing in the literature: *nutraceutical properties* (referring to specialty teas) (Carloni, et al., 2023), *antinutrients* in plant-based foods during food processing (Faizal et al., 2023), and *bioresources* (from fruit and vegetable waste for bioplastics production) (Gong et al., 2024). Plant-based businesses continue to innovate, expand and grow.

Key Organizations

[Green Plants, Green Buildings](#)

[IDEAS for US \(Orlando, FL.\): Food section](#)

[National Initiative for Consumer Horticulture](#)

[Plant Based Foods Association](#)

Books, journals & epublications on plant-based businesses

[Food Business News](#) website identifies companies, trends, & product development

[Food Science and Technology International](#)

[Garden Center magazine](#)

[Greenhouse Management magazine](#)

[Morning AgClips.com](#)

[Nursery Management magazine](#)

[Produce Grower magazine](#)

[Vegconomist business magazine](#)

Research & articles on plant-based businesses

Recently published selected research & articles:

Agriitecture. (2019). [This Florida nonprofit converts lawns into micro-farms](#). Vegconomist.com.

Alsaffar, A.A. (2016). Sustainable diets: The interaction between food industry, nutrition, health and the environment. *Food Sci Technol Int.*, 22(2), 102-11.

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- Beeson, L. (2022). [COVID-19 pandemic fueled massive growth in green industry](#). *USA Today*.
- BlueCross BlueShield of North Carolina Foundation. (2023). [Case study: Reinvestment partners \(A supplement to Food is Medicine in North Carolina: Healthy food prescriptions now, and in the future\)](#).
- Bumgarner, N., Rihn, A., Campbell, J. et al. (2024). [Growing the next generation of horticultural customers and stakeholders through industry and extension outreach collaborations](#). *Journal of Environmental Horticulture*, 42(1), 23-30.
- Bureau of Economic Analysis (BEA). (2019). [Real personal consumption expenditures by type of product, quantity indexes](#).
- Carloni, P., Girolametti, F., Giorgini, E. et al. (2023). Insights on the nutraceutical properties of different specialty teas grown and processed in a German tea Garden. *Antioxidants (Basel)*, 12(11), 1943.
- Coleman, P.A. (2023). [Dynamic organic](#). *Garden Center*.
- Coleman, P.A. (2024). [Selling the edible landscape](#). *Garden Center*.
- Coleman, P.A. (2024). [So you want to grow without soil? Important considerations when investing in hydroponics for new and expanding operations](#). *Produce Grower*.
- Elkin, E., & Bloomberg. (2021). [Plant-based food sales are expected to increase fivefold by 2030](#).
- Etheredge, C.L., & Waliczek, T.M. (2020). [Perceptions of environmental health and willingness to compost fresh cut floral waste by retail flower shop owners](#). *HortTechnology*, 30(6).
- Faizal, F.I., Ahmad, N.H., Yaacob, J.S. et al. (2023). Food processing to reduce antinutrients in plant-based foods. *International Food Research Journal*, 30(1), 25-45.
- Fleming, L. (2021). Horticulture for health framework. *ISHS Acta Horticulturae 1330: XV International People Plant Symposium and II International Symposium on Horticultural Therapies: The Role of Horticulture in Human Well-being and Social Development*.
- Flint, M., Bowles, S., Lynn, A. et al. (2023). Novel plant-based meat alternatives: Future opportunities and health considerations. *Proc Nutr Soc.*, 82(3), 370-385.
- Foxx, M. (2021). [NotCo, Three Wishes, and 2Betties among 7 rapidly growing plant-based food companies](#).
- Gong, L., Passari, A.K., Yin, C. et al. (2024). Sustainable utilization of fruit and vegetable waste bioresources for bioplastics production. *Crit Rev Biotechnol.*, 44(2), 236-254.
- Good Food Institute. (2021). [U.S. retail market data for the plant-based industry](#).
- Gorman, M., Moss, R., Fisher, C. et al. (2023). Perceptions of plant-based fish among Atlantic Canadians. *J Food Sci.*, 88(5), 2178-2190.
- Guth, D.J. (2021). [The cost of doing business](#). *Nursery Management*.
- Hall, C.R., & Knuth, M.J. (2019). An update of the literature supporting the well-being benefits of plants: Part 4 – available resources and usage of plant benefits information. *Journal of Environmental Horticulture*, 38(2), 68-72.
- Hindley, C., Legrand, W., & Zaslavskaya, A. (2023). [Biophilic design in the hospitality industry: A window into back of house workspaces](#). In *Advances in Hospitality and Leisure*, 18, 1-15. Emerald Publishing Limited.
- Innovacorp. (2018). [Spark winners 2018](#).
- Janowicz, M., Galus, S., Ciużyńska, A. et al. (2023). The potential of edible films, sheets, and coatings based on fruits and vegetables in the context of sustainable food packaging development. *Polymers (Basel)*. 15(21), 4231.

Key, T.J., Papier, K., & Tong, T.Y. (2022). Plant-based diets and long-term health: Findings from the EPIC-Oxford study. *Proceedings of the Nutrition Society*, 81(2), 190-198.

MarketWatch. (2024). U.S. plant based food analysis report 2024: A \$19+ billion market by 2030 – Industry set to expand with focus on nutrition and sustainability.

Markham, C. (2022). [Noble endeavors: A Wisconsin nonprofit built a greenhouse operation to employ adults with disabilities](#). *Greenhouse Management*.

Marquis, C. (2021). [Plant-based foods are our future and entrepreneurs are helping us make the shift](#).

May, S. (2023). [The inequality pandemic: Agribusiness billionaires profit from pain in Oxfam brief](#). *Food Tank*.

McClelland, M., & Rodda, K. (2021). [More money matters](#). *Nursery Management*.

Moore, T. (2022). [New medicinal plants course addresses industry needs](#). *Morning AgClips.com*.

Nunes, K. (2021). [1-800 Flowers adds better-for-you options with acquisition](#). *Food Business News.net*.

Raskin, I.G., Prochaska, J.J., Epperson, A.E. et al. (2023). Plant-based menthol cigarettes? Food industry trends and farm-to-pack cigarette advertising. *BMJ*.

Research and Markets. (2024). US plant-based food market trends 2024-2030 in QSRs, full service restaurants, education, healthcare, lodging/Casino, recreation, business & industry, and other sectors. *Globenewswire.com*

Rubio-Licht, N. (2021). [LA companies set the pace in fast-growing natural food, plant-based industries](#). *LA Business Journal*.

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Shahrajabian, M.H., & Sun, W. (2023). [Seed biology and pharmacological benefits of fennel, lavender, thyme, and Echinacea species](#). *Seeds*, 2, 290-308.

Sharpton, J. (2024). [The family business, part 1: The dinner problem](#). *Garden Center*.

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Simin, N., Živanović, N., Božanić Tanjga, B. et al. (2024). New garden rose (*Rosa × hybrida*) genotypes with intensely colored flowers as rich sources of bioactive compounds. *Plants (Basel)*, 13(3), 424.

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Southey, F. (2021). [‘Hybrids are coming’: Making the case for cell-cultured and plant-based blends](#). *Food Navigator.com*.

Specht, K., Zoll, F., Schümann, H. et al. (2019). [How will we eat and produce in the cities of the future? From edible insects to vertical farming—a study on the perception and acceptability of new approaches](#). *Sustainability*, 11(16), 4315.

Ulloa, M.C., Marques, J.M.R., Velasco, J.E. et al. (2024). [Characterizing the US market for salad mixes through the lens of environmental preferences](#). *HortScience*, 59(4), 533-541.

Vegconomist. (2021). [French plant-based producer Roquette will open “world’s largest” pea protein plant in Canada](#).

Vegconomist. (2021). [Delivery service Plant Infusion expands across UK after initial launch drives national demand](#).

Very Local Greens. (n.d.). [Very local greens](#).

Wang, M., Li, D., Zang, Z. et al. (2022). 3D food printing: Applications of plant-based materials in extrusion-based food printing. *Crit Rev Food Sci Nutr.*, 62(26), 7184-7198.

Zang, E., Jiang, L., Cui, H. et al. (2023). Only plant-based food additives: An overview on application, safety, and key challenges in the food industry. *Food Reviews International*, 39(8), 5132-5163

Examples of plant-based businesses

There are increasing numbers of plant-based businesses, particularly in the food sector. Their websites are used to market their products so their links have not been included here: *Purvis, The Meatless Farm, Roquette, Planted, Oatly, Barbecue, No Evil Foods, Impossible Foods* among others.

[8 commercial urban farms in NYC](#), article featuring urban farms in New York City. From Hunter College New York City Food Policy Center.

[A Career in Horticulture: Making a Living Growing Plants](#) – a perspective from a nursery business owner.

[Aerofarms](#), a certified B corporation, uses indoor vertical farming, artificial intelligence and plant biology to improve food systems, food accessibility, and nutrition while promoting food traceability and food safety in the industry.

[Agripublica](#) is a vertical urban farming start-up using vacant office space in NY to create hyper-local farming operations.

[Babylon Indoor Farming](#) demonstrates how consumers can grow produce in residential, hospital, resort and corporate settings as a means of better food traceability and safety.

[Farmery](#), 8,000 ft market with food shopping on the lower level and produce growing on the upper level, is referred to as “a souped up produce stand.”

[80 Acres Farms](#), in Cincinnati, Ohio, is building a large fully automated indoor farm for commercial production.

[GrowUp Box](#) using shipping containers focus on vertical growing in London, UK, for food production.

[Imperfect Foods](#) and [Misfits Market](#), among others, sell less-than-market-perfect, slightly bruised and misshapen produce in an effort to reduce food costs and farm waste.

[Pasona Group in Japan](#) are incorporating vegetable growing in their company’s physical facilities with tomatoes dangling from ceilings, rice paddy in lobby and more.

[Smallhold Specialty Mushrooms](#) has invented proprietary technologies for this food product.

[The Sill](#) is an online houseplant delivery service, with retail storefronts across the U.S., and markets “plant parenthood” as a lifestyle choice.

[Underground farm Le Champignon de Bruxelles](#) grows mushrooms in the cellars of Cureghem using organic waste for nutritious mushrooms integrating urban agriculture, circular economy and nutritious food.

Videos, webinars & websites on plant-based businesses

[Fleet Farming](#) offers a range of services including gardening and composting virtual classes, garden installation, and school gardening programs.

[Top 10 companies in plant based food market.](#)

[Webinar: Doing business under difficult circumstances – finding the resources you need](#) from National Initiative for Consumer Horticulture.

[Growing Joy podcast: The Business of Horticulture, episode 250.](#) With interviewer Maria Failla and horticulturist Leslie Halleck.

Related organizations

[Bridge2Food](#) is an industry & technical community for plant-based foods & proteins [Bureau of Economic Analysis \(BEA\)](#)

[Good Food Institute](#)

[North Carolina Food Innovation Lab](#)

[YieldWise, Rockefeller Foundation](#)

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