

EATING OURSELVES SICK: A REGENERATIVELY FARMED APPLE A DAY KEEPS THE DOCTOR, AND MAYBE EVEN THE THERAPIST, AWAY

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ABSTRACT

This Note addresses the longstanding practice of regenerative farming as its resurgence becomes an increasingly prominent topic in discussions surrounding public health. Recently, doctors, politicians, and health advocates alike have taken to various platforms to discuss the essential role agriculture plays in both physical and mental well-being. More specifically, emerging research and public health advocacy suggest that implementing regenerative farming practices may play a significant role in combating the growing physical and mental health crises in America.

Although regenerative farming practices are often overlooked due to their perceived lack of convenience and efficiency compared to industrialized agriculture, these practices can reduce reliance on pesticides, replenish soil health, and produce more nutrient-dense food. Healthier soil leads to healthier, more nutrient-rich crops and livestock, allowing food to provide more meaningful and sustainable nourishment.

This Note argues that by providing farmers with the proper framework, support, and resources necessary to successfully implement regenerative practices, the United States can begin addressing the nation's growing health crises by placing healthier food on Americans' tables. In turn, more nutrient-dense food can improve both physical and mental health, particularly in light of emerging research surrounding the gut-brain axis and the gut microbiome's role in mental well-being. While regenerative agriculture presents challenges related to accessibility, cost, risk, competition, and consumer demand compared to industrial farming practices, this Note examines three implementation theories that could help minimize these barriers, encourage adoption, and maintain consumer accessibility. Ultimately, this Note advocates for agricultural practices that prioritize soil health, nutrient density, and the long-term well-being of both people and the environment.

I. INTRODUCTION

Agriculture does not just influence our daily lives—it is the backbone of them.¹ Agriculture plays a vital role in everything, from the economy that sustains us and the groceries on our local market’s shelves to the food on our dinner plates—its reach even extends to the sports we play and watch.² While each of these are undeniably important, none have as direct an impact on our health and well-being as the food we consume. The quality of our diet can influence our risk of chronic metabolic diseases, such as diabetes, heart disease, and stroke.³ Yet, achieving better health is not just about *what* we eat—it is about *how* our food is produced and, critically, whether we can afford it.⁴ In a world where economic pressures often limit accessibility to healthy options, advocating for more regeneratively produced crops and livestock could drastically transform our health for the better while simultaneously making healthier choices more accessible to all.

Most of the produce and livestock grown and raised in the United States are a result of industrial agriculture.⁵ More specifically, nearly 99% of farm animals in the United States are raised on factory farms and 59% of United States farmland is used for cash and commodity crops.⁶ This Note provides a stark glimpse into

1. Beau Hastings, *5 Ways Agriculture Impacts Our Lives*, NAT’L DAY CALENDAR (Apr. 11, 2026, at 15:05 CT), <https://nationaldaycalendar.com/lists/5-ways-agriculture-impacts-our-lives> [<https://perma.cc/U4RG-ESYW>].

2. *Id.*; see *Making the Connection Between Ag and Sports*, UPFIELD GROUP (May 29, 2026, at 21:15 CT), <https://upfieldgroup.com/making-the-connection-between-ag-and-sports/> [<https://perma.cc/QQ5Q-A4CT>].

3. *How Your Eating Habits Affect Your Health*, NIH NEWS IN HEALTH (Nat’l Inst. of Health, Bethesda, Md.), May 2017, at 4, <https://newsinhealth.nih.gov/sites/newsinhealth/files/2017/May/NIHNiHMay2017.pdf> [<https://perma.cc/23FL-LEKF>].

4. See *Is Regeneratively Farmed Food More Nutritious?*, RASE (Feb. 27, 2024), <https://www.rase.org.uk/news/is-regeneratively-farmed-food-more-nutritious/> [<https://perma.cc/H5GK-GVUZ>] (showing that regenerative practices average healthier soil with two times the amount of soil organic matter and 30% more essential vitamins including vitamins K, C, E, and B1).

5. See Hazra Khatoon, *The Rise of Industrial Agriculture, Explained*, SENTIENT FOOD (Oct. 11, 2023), <https://sentientmedia.org/intensive-agriculture> [<https://perma.cc/5WSA-222P>].

6. *Factory Farms Expanding as Cruel, Unsustainable Industrial Agriculture Dominates the U.S. Food System*, FARM SANCTUARY (Feb. 21, 2024), <https://www.farmsanctuary.org/news-stories/2022-ag-census-factory-farms-expanding> [<https://perma.cc/UDY3-69RY>]; *Less Corn, More Fruits and Vegetables Would Benefit U.S. Farmers, Consumers and Rural Communities*, UNION OF CONCERNED SCIENTISTS (Oct. 22, 2013),

how the United States plunged down the destructive rabbit hole of industrialized agriculture and establishes why a transition to regenerative practices is necessary to safeguard the health of all consumers.

II. THE EVOLUTION OF AGRICULTURE: FROM FAMILIAL FIELDS TO FACTORIES

A. The Industrialization of Agriculture

Prior to the industrialization of agriculture, Americans would turn their homestead into a subsistence-focused farm.⁷ Whatever surplus the family had, they would often trade for items they were unable to make for themselves.⁸ By the 1950s, farmers began to feel a governmental push to consolidate.⁹ In agriculture, consolidation is the shift from many, smaller farms, to fewer, larger farms.¹⁰ Between the late 1950s and the 1990s, farms across the United States “more than doubled in size,” and smaller farms became few and far between.¹¹ The rapid shift from labor-intensive subsistence farming to cash crops was largely driven by the development of new technology, such as chemical pesticides and fertilizers as well as larger, more efficient tractors.¹²

With the development of this technology, farmers were able to work far greater acreage using far less labor and successfully capitalize on economies of scale by increasing production and lowering consumer costs.¹³ However, the modern industrialization of agriculture has led to the industry’s concentration on a select range of crop species, like corn and soybeans, alongside a heavy reliance on technological inputs, including chemical fertilizer and pesticides.¹⁴ One way

<https://www.ucsusa.org/about/news/farmers-consumers-and-rural-communities>
[<https://perma.cc/MQ88-TVYU>].

7. *From Farm to Factory, the Beginning of the Industrial Revolution in New England*, TSONGAS INDUS. HIST. CTR. (2015),
https://www.uml.edu/docs/Nutter_workday_FromFarmFactory_tcm18-203202.pdf
[<https://perma.cc/B9WU-YN2S>].

8. *Id.*

9. *Industrialization of Agriculture*, JOHNS HOPKINS CTR. FOR A LIVABLE FUTURE: FOOD SYS. PRIMER (Mar. 15, 2026, at 12:02 CT),
<https://foodsystemprimer.org/production/industrialization-of-agriculture>
[<https://perma.cc/J6WZ-4GFB>].

10. *Id.*

11. *Id.*

12. *Id.*

13. *Id.*

14. *Id.*; *Period 3: Modern Industrial Agriculture (1800/1900 CE – Present)*, INTEGRATE: FUTURE OF FOOD (Jan. 11, 2018),

industries achieve this concentration is through the use of monocropping, a practice where farmers continually grow the same crop on the same land without rotating to a different crop.¹⁵ Monocropping, driven by corn and soybean production, has fueled the widespread use of corn syrup, palm oil, and soybean oil—highly prevalent yet nutrient-poor ingredients that have significantly contributed to global malnutrition.¹⁶ Additionally, agricultural monoculture leads to pest resistance and, as a result, a heavier reliance on harmful pesticides.¹⁷

When analyzing the adverse impact of pesticides, two major health concerns arise: the depletion of essential nutrients in our soil and increased exposure to glyphosate, both of which contribute to rising rates of metabolic disorders and even some cancers, like non-Hodgkin's lymphoma.¹⁸ The relentless pursuit of profit from commodity crops—particularly those subsidized by the 2008 United States Farm Bill—has come at the expense of our health, as producers prioritize financial gain over the well-being of consumers.¹⁹ The United States needs to shift its agricultural focus from mass-production to the health of its people, or it risks losing the linchpin of the agricultural industry—people.

B. Regenerative Farming: Why the United States Should Return to Its Roots

Health advocates are increasingly promoting regenerative agriculture as a solution to today's health crises, arguing many of these issues stem from the

https://serc.carleton.edu/integrate/teaching_materials/food_supply/student_materials/1178 [https://perma.cc/28AQ-FN6Q].

15. Katie Garrity, *Here's Everything You Need to Know About Monocropping (And How It's Hurting the Environment)*, GREENMATTERS (May 19, 2020, at 10:50 ET), <https://www.greenmatters.com/p/what-is-monocropping> [https://perma.cc/WJY4-EK7D].

16. Ocean Robbins, *Monocropping: A Disastrous Agricultural System*, FOOD REVOLUTION NETWORK: BLOG (Mar. 18, 2022), <https://foodrevolution.org/blog/monocropping-monoculture/> [https://perma.cc/P9S9-SX3H].

17. Peter Kogut, *Monoculture Farming in Agriculture Industry*, EOS DATA ANALYTICS: BLOG (Mar. 11, 2026), <https://eos.com/blog/monoculture-farming> [https://perma.cc/X3J5-F4AR].

18. *Id.*; Sheila Kaplan, *Childhood Exposure to Common Herbicide May Increase the Risk of Disease in Young Adulthood*, UNIV. CAL. BERKELEY PUB. HEALTH (Mar. 1, 2023), <https://publichealth.berkeley.edu/news-media/research-highlights/childhood-exposure-to-common-herbicide-may-increase-the-risk-of-disease-in-young-adulthood> [https://perma.cc/P7UP-YEYS]; Dennis D. Weisenburger, *A Review and Update with Perspective of Evidence that the Herbicide Glyphosate (Roundup) is a Cause of Non-Hodgkin Lymphoma*, 21 CLINICAL LYMPHOMA, MYELOMA & LEUKEMIA 621, 628 (2021).

19. Whitney L. Do et al., *Consumption of Foods Derived from Subsidized Crops Remains Associated with Cardiometabolic Risk: An Update on the Evidence Using the National Health and Nutrition Examination Survey 2009–2014*, NUTRIENTS, Oct. 23, 2020, at 3244, 3245.

negative consequences of industrial farming practices.²⁰ Where industrial agriculture focuses on commodity crops and agricultural monoculture, regenerative agriculture manifests a more holistic approach.²¹ Regenerative agriculture utilizes techniques that prioritize variability, capitalizing on a biodiverse farm's ability to renew soil as well as build a resistance to weather, disease, and pests.²² According to soil-scientist Carl Rosier, regenerative agriculture can be summed up as a chemical-free farming approach that embraces practices such as no-till farming and cover cropping.²³ As the name suggests, no-till farming involves a process in which farmers do not till their fields prior to planting their crops.²⁴ Cover-cropping reduces the reliance on pesticides, in turn improving soil health and allowing for a natural resistance to pests and disease.²⁵ Cover-cropping aims to enhance nutrient retention in soil by planting a winter-resilient crop after the fall harvest.²⁶ By prioritizing biodiversity, regenerative agriculture restores soil nutrients, leading to healthier crops and more nutrient-dense food, which in turn provides greater health benefits.²⁷

Historically, regenerative agriculture has been utilized by Black and Indigenous-focused agricultural organizations.²⁸ It is important to note that many practices used in regenerative agriculture are based on Indigenous land management techniques.²⁹ As demonstrated by Black and Indigenous-led agricultural organizations, regenerative agriculture depends on nutrient-dense soil

20. *Regenerative Agriculture 101*, NAT. RES. DEF. COUNCIL (Nov. 29, 2021), <https://www.nrdc.org/stories/regenerative-agriculture-101> [<https://perma.cc/7TTR-SQW6>].

21. *Id.*

22. *Id.*

23. Tim Alexander, *Study Aligns Regenerative Farming with Human Health Benefits*, WBCU (Jan. 25, 2023, at 11:00 CT), <https://www.wcbu.org/2023-01-25/study-aligns-regenerative-farming-with-human-health-benefits> [<https://perma.cc/F5B8-W59Z>].

24. *Northwest No-Till Farming for Climate Resilience*, U.S. DEP'T OF AGRIC. (April 1, 2026, at 08:48 CT), <https://www.climatehubs.usda.gov/hubs/northwest/topic/northwest-no-till-farming-climate-resilience> [<https://perma.cc/3PL9-GZAZ>].

25. Sharad C. Phatak & Juan Carlos Diaz-Perez, *Managing Pests with Cover Crops*, in *MANAGING COVER CROPS PROFITABLY* 25, 29 (Andy Clark ed., 3d ed., 2007); Nancy McNiff, *Cover Crops Benefit Both Commercial Farmers and Urban Gardeners*, U.S. DEP'T OF AGRIC.: FARMERS.GOV BLOG (Jan. 12, 2022), <https://www.farmers.gov/blog/cover-crops-benefit-both-commercial-farmers-and-urban-gardeners> [<https://perma.cc/T8TK-9G2M>].

26. McNiff, *supra* note 25.

27. *Regenerative Agriculture 101*, *supra* note 20.

28. *What is Regenerative Agriculture?*, FOODPRINT (Feb. 28, 2024), <https://foodprint.org/issues/regenerative-agriculture/> [<https://perma.cc/C8FV-J8HM>].

29. *Id.*

that fosters a productive agroecosystem.³⁰ Reliance on nutrient-dense soil, which prioritizes biodiversity to naturally enhance soil health, ultimately improves the nutritional profile of produce and livestock for human consumption.³¹

Additionally, agroecological practices foster an environment in which a reliance on chemical pesticides is not necessary.³² Pesticides and chemical fertilizers disrupt the natural bacteria in the soil that is necessary for regenerative practices.³³ By allowing native flora and fauna to fill their natural roles, agriculture embraces its built-in pest deterrents, such as non-invasive insects and wildlife.³⁴ This approach not only restores the balance to ecosystems but also fosters an environment where agriculture regains its resistance to weather and disease.³⁵ Regenerative agriculture generates more nutrient-dense soil while simultaneously decreasing exposure to harmful chemicals, resulting in more satiating and nutritionally enhanced food as well as less exposure to adverse chemicals such as glyphosates.³⁶

III. THE PROOF IS IN THE PUDDING . . . OR PLANTING

A. Depleted Nutrients: How Commodity Crops are Destroying Our Health

Soil health does not just impact the land's ability to grow and protect produce and feed livestock. It also has a direct relationship with the amount of nutrients produce and livestock are able to provide consumers.³⁷ A study conducted primarily in the Midwest and Eastern United States required participating farms to grow one acre of a commodity crop using industrial practices alongside their

30. *Id.*

31. See *Regenerative Agriculture 101*, *supra* note 20; David R. Montgomery et al., *Soil Health and Nutrient Density: Preliminary Comparison of Regenerative and Conventional Farming*, PEERJ, Jan. 27, 2022, at 11.

32. *What is Regenerative Agriculture?*, *supra* note 28.

33. *Id.*

34. Guy Sela, *Regenerative Agriculture: A Strategic Approach for Farming*, CROPAIA (Mar. 31, 2026, at 08:56 CT), <https://cropaia.com/blog/regenerative-agriculture/> [<https://perma.cc/EM25-PH69>].

35. *Id.*

36. Montgomery et al., *supra* note 31, at 9.

37. See Hannah Hickey, *Farms Following Soil-Friendly Practices Grow Healthier Food, Study Suggests*, UNIV. OF WASH. NEWS (Feb. 24, 2022), <https://www.washington.edu/news/2022/02/24/farms-following-soil-friendly-practices-grow-healthier-food-study-suggests/> [<https://perma.cc/GHG5-2VN2>].

regeneratively farmed crops.³⁸ Once the produce was ready, crop samples were sent to lab facilities to be analyzed.³⁹ The study ultimately found:

The food grown under regenerative practices contained, on average, more magnesium, calcium, potassium and zinc; more vitamins, including B1, B12, C, E and K; and more phytochemicals, compounds not typically tracked for food but that have been shown to reduce inflammation and boost human health. Crops grown in the regenerative farms were also lower in elements broadly detrimental to human health, including sodium, cadmium and nickel, compared with their conventionally grown neighbors.⁴⁰

Basil's Harvest, a Chicago-based group, also conducted a similar study, promoting the idea that there is a causal relationship between regenerative practices, soil health, and human health.⁴¹ This study examined four different farms' soil organic matter and plant-available nitrogen.⁴² Each farm followed regenerative practices for different lengths of time: Janie's Farm for 25 years, Janie's Farm 2 for 15 years, Cow Creek Organics for 2 years, and the Cullum Field at Janie's Farm, which had just begun its first year of regenerative farming.⁴³ The study ultimately found that farms following regenerative practice for 25 and 15 years had higher concentrations of both soil organic matter and plant-available nitrogen.⁴⁴

38. *Id.*

39. *Id.*

40. *Id.*

41. Alexander, *supra* note 23.

42. *Id.*; see also *Five Benefits of Soil Organic Matter*, AGRISIGHT (Mosaic, Tampa, Fla.), June 2021, https://www.cropnutrition.com/wp-content/uploads/2023/06/AgriSight_Issue_19-5_Benefits_of_Soil_OM_Nov2022_No_Bleeds.pdf [<https://perma.cc/M3QH-DMXB>] (explaining soil organic matter and showing that it is essential to crop production and soil health, with higher levels leading to "more consistent yields and greater long-term profitability"); *How Does Nitrogen Help Plants Grow?*, PHOSLAB TESTING LAB'YS: PHOSLAB BLOG (May 7, 2013), <https://www.phoslab.com/how-does-nitrogen-help-plants-grow> [<https://perma.cc/CAD9-7WJV>] (demonstrating that plant-available nitrogen plays a direct role in chlorophyll production, allowing plants to convert light into energy more efficiently for growth); *Chlorophyll*, NAT'L GEOGRAPHIC (Oct. 31, 2023), <https://education.nationalgeographic.org/resource/chlorophyll/> [<https://perma.cc/7WJR-UJ97>] (describing how chlorophyll is used during photosynthesis).

43. Alexander, *supra* note 23.

44. *Id.*

For millennia, food was considered a cornerstone of health and wellness.⁴⁵ In 400 B.C., Hippocrates—the Father of Medicine himself—said, “Let medicine be thy food and let food be thy medicine.”⁴⁶ Henri Leclerc, a French physician, began to develop an evidentiary basis for the long-held belief that herbal and food medicine could decrease inflammation, balance hormones, alkalize the body, balance blood sugar, and improve nutrient absorption, coining it “phytotherapy.”⁴⁷ Nutrients, also referred to as phytonutrients, are essential to the evidentiary basis phytotherapy is built upon.⁴⁸ Nutrient depletion caused by industrialized farming, reliance on chemical fertilizers, and lack of crop rotation can result in reduced mineral content and lower vitamin levels.⁴⁹ Nutrient-deficient diets can result in a multitude of negative side effects, including an increased risk of chronic illnesses and mental health issues.⁵⁰ To illustrate, the cause of diabetes is often linked to vitamin deficiencies and malnourished diets.⁵¹

Over the past 40 years, the number of people with diabetes has nearly quadrupled, with the majority of cases occurring in low- and middle-income countries.⁵² Despite being considered one of the most developed and high-earning nations in the world, the United States has the highest prevalence of diabetes among developed nations.⁵³ The raw data indicate that the 30 million people with diabetes in the United States account for around two-thirds of the cases of diabetes among the other 37 nations within the developed nation league.⁵⁴ Diabetes has a

45. Victor Katch, *Food as Medicine*, UNIV. OF MICH.: MICH. TODAY (June 18, 2017), <https://michigantoday.umich.edu/2017/06/18/food-as-medicine/> [https://perma.cc/F9N2-VHAE].

46. *Id.*; Peter Tyson, *The Hippocratic Oath Today*, PBS: NOVA (Mar. 27, 2001), <https://www.pbs.org/wgbh/nova/article/hippocratic-oath-today/> [https://perma.cc/AB93-JGYD].

47. Katch, *supra* note 45.

48. See Eric Metcalf, *Phytonutrients*, WEBMD: NOURISH BY WEBMD (Oct. 16, 2024), <https://www.webmd.com/diet/phytonutrients-faq> [https://perma.cc/6N6L-Y4P8].

49. May Zhu, *How Does Nutrient Depletion in Soil Affect Family Health?*, BEGIN HEALTH (June 10, 2024), <https://www.beginhealth.com/blogs/learn/how-does-nutrient-depletion-in-soil-affect-family-health> [https://perma.cc/F7F6-PUQN].

50. *Id.*

51. See Samer Younes, *The Role of Micronutrients on the Treatment of Diabetes*, HUM. NUTRITION & METABOLISM, Mar. 2024, at 1–2.

52. *Id.* at 9.

53. John Schieszer, *New IDF Diabetes Atlas: A ‘Wake-Up Call’ for Endocrinologists?*, ENDOCRINOLOGY ADVISOR (Dec. 4, 2015), <https://www.endocrinologyadvisor.com/features/new-idf-diabetes-atlas-a-wake-up-call-for-endocrinologists/> [https://perma.cc/D973-4PH6].

54. *Id.*

direct, causal link to other health problems, such as “blindness, kidney failure, heart attacks, stroke and lower limb amputation.”⁵⁵

Alzheimer’s disease-caused dementia (Alzheimer’s) has increasingly been referred to as a type of diabetes, with some professionals even coining it Type 3 Diabetes.⁵⁶ Researchers have recently discovered shared molecular and cellular features between diabetes and Alzheimer’s.⁵⁷ Researchers at Brigham Young University analyzed brain tissue from Alzheimer’s patients’ cadavers and confirmed that, similar to diabetes, genes responsible for glucose metabolism in the brain were impaired.⁵⁸ The compromised nature of the glucose-metabolizing genes leads to a key feature of diabetes—insulin resistance—as the brain struggles to break down the glucose necessary for energy.⁵⁹ This discovery has led more and more doctors to believe that diabetes prevention and management can double as Alzheimer’s prevention and management.⁶⁰ More pointedly, a more nutrient-dense diet can prevent insulin spikes, not only reducing the risk of diabetes, but also the risk of developing Alzheimer’s.⁶¹ By adopting agroecological practices, essential nutrients will be placed back into our soil and, thus, our food, resulting in a more nutrient-dense diet and an overall healthier society.⁶²

B. The Reversibility of Diabetes, Other Metabolic Diseases, and the Prevention of Alzheimer’s

Noncommunicable diseases (NCDs) are the number one cause of death and disability worldwide.⁶³ NCDs are responsible for an estimated 65% of deaths in the Americas and a steep 38% of deaths in people under 70 years old.⁶⁴ Risk factors

55. Younes, *supra* note 51, at 9.

56. Press Release, Keck Sch. of Med. of USC, A Growing Body of Research Links Type 2 Diabetes with Risk for Alzheimer’s (Mar. 16, 2022), <https://keck.usc.edu/news/a-growing-body-of-research-links-type-2-diabetes-with-risk-for-alzheimers/> [https://perma.cc/UJE7-FZSL].

57. *Id.*

58. *Id.*

59. *Id.*

60. *Id.*

61. *Id.*

62. Ashleigh Rockwell, *Healing and Health Through Regenerative Agriculture*, VA NEWS (Oct. 29, 2023), <https://news.va.gov/125134/healing-health-through-regenerative-agriculture/> [https://perma.cc/7A6E-SVKT].

63. *Noncommunicable Diseases (NCDs)*, NCD ALL. (Apr. 1, 2026, at 08:38 CT), <https://ncdalliance.org/why-ncds/NCDs> [https://perma.cc/JV9J-KKLL].

64. PAN AM. HEALTH ORG., WORLD HEALTH ORG., NCDs AT A GLANCE 2025, at 3 (2025), <https://www.paho.org/sites/default/files/2025-03/ncds-glance-2025-21-mar.pdf> [https://perma.cc/NX8V-2RRF].

are often modifiable behaviors, including lack of physical activity and unhealthy diets.⁶⁵ NCDs include cardiovascular disease, cancer, diabetes, and mental health conditions, including Alzheimer's disease, bipolar disorder, and autism spectrum disorder (ASD or autism).⁶⁶ Preventing, controlling, and even reversing NCDs can be achieved by consuming a nutrient-dense diet and reducing caloric intake.⁶⁷

*C. Nurture Nature, Reap Nutrition: How Regenerative Farming Enriches
Livestock, Crops, and You*

*1. Cows Go Moo, You Go Yoo Hoo! How Grass-Fed Cows Produce More
Nutrient-Dense Byproducts*

One way to enhance the nutrient density of our food—particularly animal-based products—is by considering the diets of the animals, such as cows and chickens.⁶⁸ To substantiate this claim, when comparing the nutritional profile of beef from grass-fed cows to that of grain-fed, the latter is significantly lower in “favorable fatty acids, key phytonutrients, vitamins and minerals.”⁶⁹ Grass-fed beef not only contains fewer calories than conventional grain-fed beef, but it also

65. *Noncommunicable Diseases*, WORLD HEALTH ORG. (Sep. 25, 2025), <https://www.who.int/news-room/fact-sheets/detail/noncommunicable-diseases> [<https://perma.cc/GRM2-A7FP>].

66. Erica Cirino, *Most Common Noncommunicable Diseases*, HEALTHLINE (June 14, 2018), <https://www.healthline.com/health/non-communicable-diseases-list> [<https://perma.cc/87AV-2KRL>].

67. Aida Budreviciute et al., *Management and Prevention Strategies for Non-communicable Diseases (NCDs) and Their Risk Factors*, FRONT. PUB. HEALTH, Nov. 26, 2020, at 1, 8, <https://www.frontiersin.org/journals/public-health/articles/10.3389/fpubh.2020.574111/full> [<https://perma.cc/9N5S-NSVT>]; Sarah J. Hallberg et al., *Reversing Type 2 Diabetes: A Narrative Review of the Evidence*, 11 NUTRIENTS 48, 49–50 (2019).

68. See Davendra Ramkumar et al., *Food for Thought: Making the Case for Food Produced via Regenerative Agriculture in the Battle Against Non-Communicable Chronic Diseases (NCDs)*, ONE HEALTH, June 2024, at 1, 7, <https://pmc.ncbi.nlm.nih.gov/articles/PMC11070632/pdf/main.pdf> [<https://perma.cc/4YMF-2WXH>].

69. Allen Williams, *Nutritional Comparisons Between Grass-Fed Beef and Conventional Grain-Fed Beef*, UNDERSTANDING AG (Mar. 30, 2026, at 14:48 CT), <https://understandingag.com/nutritional-comparisons-between-grass-fed-beef-and-conventional-grain-fed-beef> [<https://perma.cc/5R8V-CDM6>]; see Nicholas Monjotin et al., *Clinical Evidence of the Benefits of Phytonutrients in Human Healthcare*, NUTRIENTS, Apr. 20, 2022, at 1, 48, 86, <https://pmc.ncbi.nlm.nih.gov/articles/PMC9102588/pdf/nutrients-14-01712.pdf> [<https://perma.cc/U38L-2Y37>] (showing phytonutrients play a key role in “the prevention of serious chronic diseases such as diabetes, obesity, and hypertension, along with different types of cancer or degenerative diseases”).

boasts higher protein, lower fat, and nearly double the amount of essential acids and vitamins, including Omega-3s, Vitamin E, Vitamin K, and Vitamin B12.⁷⁰

2. Unscrambling the Confusion of Egg Labels: What They Really Mean for Your Health... and the Chickens

These dietary changes in animals benefit not only cow by-products, but also chicken eggs. There is a whirlwind of confusing egg labels in grocery stores: cage-free, free-range, pasture-raised, organic, vegetarian-fed, non-GMO, and farm-fresh, just to name a few. Unscrambling the confusion surrounding egg labels reveals key differences in the nutritional value of eggs from hens with varying space, diet, and outdoor access.⁷¹ Vital Farms, an American public-benefit corporation known for its eggs and butter, conducted a survey to gauge consumer perceptions of various egg labels and compared them to the actual nutritional differences in a clear, easy-to-read infographic.⁷²

70. Williams, *supra* note 69.

71. See Emery Cowan, *On Egg Labels, Consumer Confusion Still Reigns*, NEW HOPE NETWORK (June 26, 2014), <https://www.newhope.com/regulatory/on-egg-labels-consumer-confusion-still-reigns-infographic-> [<https://perma.cc/H49F-AUJM>].

72. *Id.*; *About Us*, VITAL FARMS (Mar. 31, 2026, at 08:58 CT), <https://vitalfarms.com/about-us/> [<https://perma.cc/SK3F-5HWY>] (stating the mission of the company is to “bring ethically produced food to the table” and their purpose is to “improve the lives of people, animals, and the planet through food”).

PASTURE-RAISED	FREE-RANGE	CAGE-FREE
108 SQ FT. MINIMUM PER CHICKEN	2 SQ FT. AVERAGE PER CHICKEN	1 SQ FT. AVERAGE PER CHICKEN
Pasture-raised hens live as natural a life as possible. They spend their days outdoors, and only come into their coops at night for safety and shelter.	Free-range hens must have some outdoor access, but that may be a mere hole for them to poke their heads through.	Cage-free hens aren't in cages, but they can be packed together with no outdoor access.
 NO ANTIBIOTICS	 NO ANTIBIOTICS	 ANTIBIOTICS ALLOWED
 OUTDOOR ACCESS ALL DAY, EVERY DAY	 LIMITED OUTDOOR ACCESS	 NO OUTDOOR ACCESS
 NATURAL GRASSES	 NATURAL GRASSES NOT INCLUDED	 NATURAL GRASSES NOT INCLUDED
 30-50% OF DIET COMES FROM NATURAL FORAGING	 100% CORN-BASED DIET	 100% CORN-BASED DIET

Figure 1 – Source: Vital Farms (via New Hope Network)⁷³

Out of the laundry list of egg labels, only three were included in the Vital Farms' survey: pasture-raised, free-range, and cage-free.⁷⁴ Of these, both free-range and cage-free were the most familiar to consumers.⁷⁵ Additionally, these labels were often associated with terms such as "roaming free," "outdoor living," "open fields," and "natural diet."⁷⁶ Despite consumer beliefs, only pasture-raised eggs fit these descriptions.⁷⁷ Although these labels may sound similar, they significantly impact the space each hen has, the level of outdoor access they receive, and, perhaps most importantly, their diets.⁷⁸

While hens that lay cage-free eggs are not in cages, on average they only have around one square foot of space per chicken.⁷⁹ Additionally, they have no

73. Cowan, *supra* note 71.

74. *Id.*

75. *Id.*

76. *Id.*

77. *Id.*

78. *Id.*

79. *Id.*

outdoor access, antibiotics are allowed, and their diets solely consist of corn.⁸⁰ Free-range, on the other hand, provides each chicken with an average of a measly two square feet of space.⁸¹ The conditions for free-range chickens are slightly better than those for cage-free chickens, as they have limited outdoor access and are raised without antibiotics.⁸² Despite the promising sound of “outdoor access,” “a mere hole for [the chickens] to poke their heads through” meets the requirements for outdoor access.⁸³ A free-range chicken’s diet is still 100% corn based.⁸⁴

Pasture-raised chickens have a drastically different lifestyle than both free-range and cage-free.⁸⁵ Pasture-raised chickens have a minimum of 108 square feet per chicken and have as natural of a life and diet as possible.⁸⁶ This means pasture raised chickens have no antibiotics, spend most of their days outdoors, and feed on natural grasses.⁸⁷ Unlike cage-free and free-range hens, pasture-raised hens naturally forage for about 30–50% of their diet.⁸⁸ As a result, pasture-raised eggs have 33% less cholesterol, 25% less saturated fat, 66% more vitamin A, two times more omega-3 fatty acids, three times more vitamin E, four times more vitamin D, and seven times more beta-carotene than conventional eggs.⁸⁹ The stark contrast in the lifestyles and diets of differently labeled hens leads to dramatically healthier, more nutrient-dense eggs—ultimately creating a stark contrast in the health of those who consume them.⁹⁰

3. You Reap What You Sow: How Regenerative Farming Increases Nutrients in Fruits and Veggies

Just as grass-fed cows and pasture-raised chickens enhance the nutritional value of eggs and meat, regenerative farming improves the nutrient density of fruits

80. *Id.*

81. *Id.*

82. *Id.*

83. *Id.*

84. *Id.*

85. *See id.* Although beyond the scope of this Note, it is important to consider both the ethical and health implications of this treatment. Currently, eggs that are from pasture-raised chickens—or those that are treated humanely—are marketed and sold at a premium. *Id.* Treating animals ethically should be an industry standard that is accessible to people from all financial backgrounds.

86. *Id.*

87. *Id.*

88. *Id.*

89. *Id.*

90. *Id.*

and vegetables.⁹¹ Regenerative practices combat nutrient depletion, helping to reduce the prevalence of NCDs.⁹² Nutrient density is crucial in combatting NCDs, as it supports gut microbiome health, which plays a key role in a variety of conditions such as liver disorders and even colon cancer.⁹³ Industrial practices often rely on harsh chemicals, destroying the soil microbiome, leading to lower nutritional value in our food and more wear and tear on our gut microbiome.⁹⁴ On the other hand, regenerative practices avoid chemical inputs and focus on the creation of biodiverse environments, ultimately increasing the soil's nutrients.⁹⁵ With more nutrient-dense soil comes more nutrient-dense food, leading to a happier and healthier gut microbiome and happier and healthier humans.⁹⁶

4. Why You Should Care What Your Cows and Chickens Had for Dinner

Shifting from industrialized agriculture to regenerative practices does more than just improve our health; the resulting increase in nutrient density can play a crucial role in treating NCDs and may even go as far as reversing Type 2 Diabetes.⁹⁷ Dietary manipulation has historically served as a fundamental approach to treating and reducing NCDs, based on the perception that its benefits were solely derived from the nutrient content.⁹⁸ While the nutrient content alone does not treat or reverse NCDs, the increased nutrient density's effect on the gut microbiome can be instrumental in managing them.⁹⁹ Nutrient-dense foods, particularly those rich in dietary fiber, function like prebiotics—such as those found in fermented foods—by increasing microbial diversity and reducing various inflammation markers.¹⁰⁰ The most straightforward and effective approach to

91. Ramkumar et al., *supra* note 68, at 7; Cowan, *supra* note 71; Williams, *supra* note 69.

92. Ramkumar et al., *supra* note 68, at 1, 3.

93. *Id.*

94. *See id.* at 3, 6–8.

95. *Id.*

96. *See id.*

97. *See id.* at 2; Hallberg et al., *supra* note 67, at 53; Harvard Health Publ'g Staff, *Healthy Lifestyle Can Prevent Diabetes (and Even Reverse It)*, HARV. HEALTH PUBL'G: HARV. HEALTH BLOG (Oct. 20, 2023), <https://www.health.harvard.edu/blog/healthy-lifestyle-can-prevent-diabetes-and-even-reverse-it-2018090514698> [<https://perma.cc/7DLA-KH29>].

98. Ramkumar et al., *supra* note 68, at 2.

99. *Id.*

100. Ping Zhang, *Influence of Foods and Nutrition on the Gut Microbiome and Implications for Intestinal Health*, INT. J. MOL. SCI., Aug. 24, 2022, 1, 9, <https://pmc.ncbi.nlm.nih.gov/articles/PMC9455721/pdf/ijms-23-09588.pdf> [<https://perma.cc/RMF7-RTUK>].

prime the gut microbiome to combat NCDs is a nutrient-dense, healthy diet.¹⁰¹ Regenerative farming practices yield a more nutrient-dense diet, making it easier to use dietary manipulation to combat and reverse diabetes and other NCDs.

D. The Connection Between the Gut Microbiome and Mental Health

In recent years, the medical field has uncovered the critical role the gut microbiome plays in overall health.¹⁰² Mental health disorders also fall under the umbrella of NCDs, meaning that maintaining a balanced gut microbiome may help reduce the risk of these conditions.¹⁰³ While many assume the brain is solely responsible for mental health, research reveals that gut health—and the trillions of microbes living in our gut—plays a surprisingly important role in our overall mental well-being.¹⁰⁴

A comprehensive overview of the gut-brain axis is essential for understanding the connection between the brain and the gut microbiome.¹⁰⁵ This reciprocal communication system consists of biochemical and physical pathways that connect the central nervous system (CNS)—the brain—and the enteric nervous system (ENS)—the gut.¹⁰⁶ Some medical professionals even describe the gut as having a brain of its own, with studies showing the gut can operate independently of the brain.¹⁰⁷ In a healthy system, the gut and brain rely on one another to maintain homeostasis, a relationship mediated by gut microbes that exchange signals with ENS neurons.¹⁰⁸

A key component of this communication is neurotransmitters, which help regulate mood, stress, and cognitive function through the microbiome-gut-brain axis.¹⁰⁹ Serotonin, dopamine, and norepinephrine are among the most recognized neurotransmitters, which are often thought to be produced exclusively in the brain.¹¹⁰ Contrary to popular belief, the gut microbiome not only facilitates

101. Ramkumar et al., *supra* note 68, at 9.

102. *Id.* at 3.

103. Rumiana Tenchov, *How Your Gut Microbiome is Linked to Depression and Anxiety*, AM. CHEM. SOC'Y: CAS (Feb. 2, 2022), <https://www.cas.org/resources/cas-insights/how-your-gut-microbiome-linked-depression-and-anxiety> [<https://perma.cc/8DD3-XZX2>].

104. Maya Shetty, *Stress and the Microbiome*, STAN.: LIFESTYLE MED. (Apr. 23, 2025), <https://lifestylemedicine.stanford.edu/stress-and-the-microbiome/> [<https://perma.cc/MT7C-FA9W>].

105. *See id.*

106. *Id.*

107. *Id.*

108. *See id.*

109. *Id.*

110. *Id.*

communication with serotonin, dopamine, and norepinephrine, but also plays a role in their production.¹¹¹

Serotonin and dopamine, often called the “happiness hormones,” are known for their ability to reduce depression and enhance feelings of well-being.¹¹² Norepinephrine plays a key role in activating and regulating the body’s nervous system during high stress situations, commonly known as the “fight-or-flight response.”¹¹³ Additionally, “norepinephrine plays a role in the sleep-wake cycle, helping you to wake up, in increasing attention and focusing on performing a task, and in memory storage.”¹¹⁴ When the gut microbiome is imbalanced, neurotransmitter production in the brain can be disrupted, leading to hormonal imbalances that negatively impact both mental and physical health.¹¹⁵

Given the direct link between the brain and the gut, maintaining a healthy gut can boost neurotransmitter production and support hormonal balance, potentially remedying the mental health crisis overtaking our world today.¹¹⁶ The mental health crisis is so severe that addressing it has become one of the United Nations’ Sustainable Development Goals encompassing a broad range of mental health disorders, including “anxiety, depression, bipolar disorder, autism spectrum disorder . . . schizophrenia, and eating disorders.”¹¹⁷ Research supports the important role diet plays in mental well-being and balance.¹¹⁸ Diversifying the gut microbiome through the consumption of probiotics, prebiotics, dairy products, fruits, and vegetables may help prevent or mitigate the effects of these conditions.¹¹⁹

111. *Id.*

112. Phaisit Trakulkongsmut, *8 Key Factors Behind the Production of Happiness Hormones*, SAMITIVEJ (June 11, 2020), <https://www.samitivejhospitals.com/article/detail/happiness-hormones> [<https://perma.cc/W3G5-ZW32>].

113. *Norepinephrine (Noradrenaline)*, CLEVELAND CLINIC (Mar. 27, 2022), <https://my.clevelandclinic.org/health/articles/22610-norepinephrine-noradrenaline> [<https://perma.cc/UBY9-L8ZU>].

114. *Adrenal Hormones*, ENDOCRINE SOC’Y (Jan. 24, 2022), <https://www.endocrine.org/patient-engagement/endocrine-library/hormones-and-endocrine-function/adrenal-hormones> [<https://perma.cc/SK8R-J6FW>].

115. *See* Shetty, *supra* note 104.

116. *See id.*

117. Ruo-Gu Xiong et al., *The Role of Gut Microbiota in Anxiety, Depression, and Other Mental Disorders as Well as the Protective Effects of Dietary Components*, NUTRIENTS, July 23, 2023, at 1, 1.

118. *See id.* at 1, 14.

119. *Id.*

Diverse environments are essential not only in soil, as established earlier, but also in our bodies. Just as microbial diversity is crucial for gut health, it is equally important in soil, where it influences the nutritional quality of food.¹²⁰ To emphasize the direct connection between the two, it is now recognized that regenerative farming practices can protect and boost the production of beneficial bacteria that increases serotonin production.¹²¹

The positive effects of regenerative agriculture on mental health do not stop there. Regenerative farming can also boost farmers' mental health by protecting certain microbes in soil, like *M. vaccae*, that produce earthy smells which subconsciously boost happiness in farmers' and their surrounding rural neighbors.¹²² By embracing regenerative farming practices over traditional industrial methods, we not only diversify the soil but unlock the potential for a healthier, more resilient gut microbiome—ultimately leading to improved mental health.

IV. FERTILE GROUNDS FOR GROWTH: SCALING REGENERATIVE PRACTICES WHILE ACKNOWLEDGING RISK, COST, COMPETITION, AND CONSUMER DEMAND

With all the remarkable benefits of regenerative agriculture, it is natural to wonder why regenerative practices have not been more widely and rapidly adopted. The reality is that, like many innovations, the widespread implementation of regenerative farming faces several barriers, including risk tolerance, financial barriers, and competing with the traditional economies of scale.¹²³ A key barrier to implementation is one many on the market tend to emphasize: consumer demand.¹²⁴ If consumer demand is overlooked or misunderstood, even the best

120. *Regenerative Agriculture's Mental Health Benefits Explained*, VERDICT (Aug. 15, 2024), <https://www.verdict.co.uk/regenerative-farming-health-benefits/?cf-view> [<https://perma.cc/KG6U-USSM>].

121. *Id.*

122. *Id.*

123. Laimonas Noreika, *Regenerative Agriculture: Barriers to Adoption and How Leaders Can Help*, FORBES (July 1, 2024, at 07:15 ET), <https://www.forbes.com/councils/forbesbusinesscouncil/2024/07/01/regenerative-agriculture-barriers-to-adoption-and-how-leaders-can-help/> [<https://perma.cc/Z79U-59BF>]; RYAN PINTADO-VERTNER, UNLOCKING DEMAND FOR REGENERATIVE: A CROWDSOURCED BLUEPRINT FOR ACCELERATING CONSUMER DEMAND FOR REGENERATIVE AGRICULTURE 9, 15 (2024), <https://static1.squarespace.com/static/6611b940d211636e1933bbf3/t/66e8b0fabf18fb2269b8dfca/1726525696918/Unlocking-Demand-for-Regenerative-Agriculture-by-Smoketown.pdf> [<https://perma.cc/QP9R-9UVG>].

124. See PINTADO-VERTNER, *supra* note 123, at 11–22.

business or innovation can falter, suffering the consequences of “lower sales, higher inventory and lower profitability.”¹²⁵

Ryan Pintado-Vertner, the founder and CEO of Smoketown, “a boutique consultancy that helps mission-driven brands and organizations maximize their growth while also maximizing their ability to change the world,” has offered four distinct theories that address the adoption barriers of regenerative agriculture: the farmer-led theory, the electric car theory, the consumer-led theory, and the co-creation theory.¹²⁶ The farmer-led theory shifts the focus away from consumer demand, instead emphasizing how agroecology appeals to farmers—because, as the name implies, this theory is all about farmers.¹²⁷ This concept relies on farmers who have adopted regenerative practices to share the economic, agronomic, and mental health benefits they have experienced since embracing agroecology.¹²⁸ When farmers realize regenerative practices create healthier and more diverse soil and crops as well as less expenses and need for chemical inputs like pesticides, they might feel more inclined to adopt agroecology.¹²⁹ Since the information is spread by word of mouth, farmers will also know they have a network of peers who have successfully overcome barriers and with whom they can discuss any questions or complications.¹³⁰ As adoption becomes more widespread, other farmers will not be their only resource because the underpinning network of technology and other services will grow at a similar rate.¹³¹

The second theory, referred to as the electric car theory, takes a slightly different angle.¹³² Instead of focusing on adopters, the electric car theory banks on the assumption that consumers will eventually demand more regenerative practices.¹³³ By adopting and investing in an infrastructure that supports and encourages agroecology—just as Tesla did when the company invested in creating

125. *What Happens When a Business Does Not Meet the Demand of Consumers?*, CHRON. (Mar. 31, 2026, at 12:39 CT), <https://smallbusiness.chron.com/happens-business-not-meet-demand-consumers-21832.html> [<https://perma.cc/TF25-MGFJ>].

126. *Ryan Pintado-Vertner, Founder & Principal, Smoketown*, WHIPSTITCH CAP. (Mar. 31, 2026, at 13:23 CT), <https://www.whipstitchcapital.com/people/ryan-pintado-vertner/> [<https://perma.cc/6S55-J4UU>]; see PINTADO-VERTNER, *supra* note 123, at 7–9.

127. PINTADO-VERTNER, *supra* note 123, at 7–8.

128. *Id.*; see *Regenerative Agriculture’s Mental Health Benefits Explained*, *supra* note 120.

129. PINTADO-VERTNER, *supra* note 123, at 8; see *Regenerative Agriculture’s Mental Health Benefits Explained*, *supra* note 120.

130. See PINTADO-VERTNER, *supra* note 123, at 8.

131. *Id.*

132. *Id.* at 8–9.

133. *Id.*

a supportive infrastructure for 13 years before even releasing their first model—farmers can simultaneously create and prepare for consumer demand.¹³⁴ Additionally, farmers can leverage federal government funding and endorsement, as Tesla did, to help secure further investment and support, ensuring broader adoption and long-term sustainability of agroecological practices.¹³⁵

Another theory focuses on a key element of implementation: consumer demand. This theory—sure enough, the consumer-led theory—does not merely suggest that consumer demand is a key element; instead, the theory asserts that consumer demand is the most crucial factor in scaling regenerative agriculture by relying so heavily on it.¹³⁶ The idea is that consumer demand for regeneratively grown products will eventually necessitate farmer adoption.¹³⁷ This theory acknowledges that farmers will likely be unwilling to invest in a practice unless they know it is profitable.¹³⁸ This consideration is logical, as farmers are expected to bear the majority of the risk and costs associated with transitioning from traditional practices to regenerative ones under this theory.¹³⁹

The final theory laid out by Mr. Pintado-Vertner is a blend of elements from the farmer-led theory and the consumer-led theory, consequentially earning the title of the co-creation theory.¹⁴⁰ The co-creation theory takes the emphasis on consumer demand from the consumer-led theory and pairs it with the importance of farmer adoption and infrastructure to compensate for the fact that it is unlikely there will be substantial capital investments from the government and other investors.¹⁴¹

Here, the key barrier to address is cost. Cost weighs heavily not only on farmers adopting regenerative agriculture but also on consumers, as financial risks drive up prices.¹⁴² This challenge is not unprecedented. When select farmers initially began transitioning to the organic movement, they took on much of the conversion risk.¹⁴³ Similarly, the first few years of transitioning to regenerative practices are believed to involve higher upfront costs before the benefits are

134. *Id.*

135. *Id.*

136. *Id.* at 9.

137. *Id.*

138. *Id.*

139. *Id.*

140. *Id.* at 9–10.

141. *Id.*

142. *See id.* at 9–10, 27.

143. *See id.* at 9.

realized.¹⁴⁴ Because the price of adoption is front-loaded, many fear the costs will pass on to consumers, resulting in higher food prices and reduced accessibility.¹⁴⁵ Despite consumer support for the ideological and ethical benefits that agroecological practices offer, they are deterred by higher prices or taxes.¹⁴⁶ While various methods can help reduce or mitigate the cost barrier, no immediate solution exists to eliminate it entirely. Instead, we must advocate for regenerative practices to become the new industry standard. By forcing the mass-marketization of agroecology, production volume will increase, which will ultimately create an economy of scale and decrease the cost for both the farmer, and thus, the consumer.¹⁴⁷ However, it is important to note that regenerative practices can be more labor- and time-intensive during the initial adoption phase, creating significant challenges in competing with the efficiency of industrialized farming.¹⁴⁸

V. REGENERATIVE FARMING: THE APPLE OF MY EYE . . . AND OUR MENTAL AND PHYSICAL HEALTH

The ongoing decline in the physical and mental health of Americans has been a persistent crisis, one that the nation has been battling for decades.¹⁴⁹ While many

144. Andre Ticoulat, *Barriers to Adopting Regenerative Agriculture: Farmers' Financial Risk of Transitioning and How to Mitigate It*, MEDIUM (Jan. 25, 2024), <https://medium.com/transformation-capital/barriers-to-adopting-regenerative-agriculture-farmers-financial-risk-and-how-to-mitigate-it-77be0f6d989e> [<https://perma.cc/V9NV-DP8C>].

145. *Cultivating Resilience: EIT Food's Consumer Observatory's Latest Report on Regenerative Agriculture*, FOOD EDUCATORS (July 12, 2024), <https://www.foodeducators.eu/news-and-events/article/cultivating-resilience-eit-foods-consumer-observatorys-latest-report-on-regenerative-agriculture> [<https://perma.cc/F7AK-CK44>].

146. Jennifer Marston, *Regenerative Agriculture Less Popular 'When it Comes at the Expense of Consumers,' Says New Report from Purdue*, AGFUNDERNEWS (Sep. 12, 2024), <https://agfundernews.com/regenerative-agriculture-less-popular-when-it-comes-at-the-expense-of-consumers-says-new-report-from-purdue> [<https://perma.cc/BKD4-G3B7>].

147. See Michael Duffy, *Economies of Size in Production Agriculture*, 4 J. HUNGER & ENV'T NUTRITION 375, 376 (2009).

148. See *Period 3: Modern Industrial Agriculture (1800/1900 CE – Present)*, *supra* note 14; *What Is Regenerative Agriculture?*, RAINFOREST ALLIANCE (Oct. 7, 2024), <https://www.rainforest-alliance.org/insights/what-is-regenerative-agriculture/> [<https://perma.cc/XBC6-JVC6>] (“By year two, the labor is less intensive...[b]y year three, crop yield can increase as much as 20 percent, and farmers save on costs since they no longer need to buy herbicides.”).

149. See Thomas Insel, *America's Mental Health Crisis*, PEW (Dec. 8, 2023), <https://www.pewtrusts.org/en/trend/archive/fall-2023/americas-mental-health-crisis> [<https://perma.cc/NM98-2Z4S>]; *Rising Obesity Rates in America: A Public Health Crisis*,

attribute this overall health crisis to a variety of factors, including “increased caloric intake and reduced physical activity,” it is crucial to acknowledge the impact that the increased consumption of certain types of foods has had on Americans.¹⁵⁰ It is estimated that more than half of the calories consumed in the average American household come from ultra-processed foods.¹⁵¹ Ultra-processed foods often contain high amounts of soybean oil and corn syrup, products of the profit-driven practices of mass-produced, highly-subsidized crops in industrialized farms.¹⁵² By eating a more nutrient-dense diet, we can not only decrease and reverse the NCD crisis overtaking our nation, but we can also stabilize our mood and improve our overall well-being.¹⁵³

By investing in agroecological practices, we can increase nutrient-density within in our food, produce a wider variety of crops, create a more bio-diverse environment, and improve our overall physical and mental well-being.¹⁵⁴ Despite the persistent obstacles, by following one of the four adoption methods or encouraging government support, we can establish regenerative farming as the new industry standard, eventually making it more accessible to all.¹⁵⁵ The government can foster agroecology and improve national health by encouraging bipartisanship and passing more legislative measures like the Inflation Reduction Act.¹⁵⁶ By aligning policy initiatives with the regenerative movement, lawmakers can support long-term environmental and public health goals. This can be achieved by

OBESITY MED. ASS’N: BLOG (June 4, 2024), <https://obesitymedicine.org/blog/rising-obesity-rates-in-america-a-public-health-crisis/> [https://perma.cc/LTW6-U36M].

150. *Rising Obesity Rates in America: A Public Health Crisis*, *supra* note 149; *Ultraprocessed Foods Account for More than Half of Calories Consumed at Home*, JOHNS HOPKINS BLOOMBERG SCH. OF PUB. HEALTH (Dec. 10, 2024), <https://publichealth.jhu.edu/2024/ultraprocessed-foods-account-for-more-than-half-of-calories-consumed-at-home> [https://perma.cc/T5NX-C5BA].

151. *Ultraprocessed Foods Account for More than Half of Calories Consumed at Home*, *supra* note 150.

152. See Scott Fields, *The Fat of the Land: Do Agricultural Subsidies Foster Poor Health?*, 112 ENV’T HEALTH PERSP. A820, A821 (2004).

153. See Joseph Firth et al., *Food and Mood: How do Diet and Nutrition Affect Mental Wellbeing?*, FOOD FOR THOUGHT, June 29, 2020, at 1.

154. See PINTADO-VERTNER, *supra* note 123, at 6, 25–27; Ramkumar et al., *supra* note 68, at 1, 7; Cowan, *supra* note 71; Williams, *supra* note 69.

155. *Id.* at 7–10.

156. Savannah Bertrand, *How the Inflation Reduction Act and Bipartisan Infrastructure Law Work Together to Advance Climate Action*, ENV’T & ENERGY STUDY INST. (Sep. 12, 2022), <https://www.eesi.org/articles/view/how-the-inflation-reduction-act-and-bipartisan-infrastructure-law-work-together-to-advance-climate-action> [https://perma.cc/8XHW-JGRP] (explaining that the Inflation Reduction Act supports the shift to climate-smart processes, including in agriculture, by expanding the applicability of tax credits to them).

allocating more funding to environmentally sustainable agricultural practices, including regenerative farming, which prioritizes soil health, biodiversity, and climate resilience.¹⁵⁷ Another way to secure more funding—and, in turn, increase accessibility—for regeneratively farmed products is through regenerative federal subsidies or transition incentives programs.¹⁵⁸ Currently, many Americans lack the financial freedom to willingly see their hard-earned tax dollars go toward programs like these.¹⁵⁹

If the government is unwilling or unable to provide funding, it can still play a role by regulating the misleading terminology used to describe different animal by-products, such as the confusing labels on eggs.¹⁶⁰ This way, the government could at least ensure that consumers have the necessary information to make informed decisions about what they are financially supporting and consuming.

Regardless of how it's achieved, America needs change, because an apple a day can only keep the doctor away if the apple retains the nutrient density it's meant to have. By returning to the roots of agroecology, we can increase the nutrients in our soil and, therefore, in our food.¹⁶¹ Together, we can support a healthier environment and improve our individual health, both mentally and physically.

157. *See id.*

158. *See Transition Incentives Program*, U.S. DEP'T OF AGRIC.: FARM SERV. AGENCY (Apr. 1, 2026, at 09:48 CT), <https://www.fsa.usda.gov/resources/Conservation/transition-incentives-program> [<https://perma.cc/S9ZT-89GK>].

159. *See Cultivating Resilience: EIT Food's Consumer Observatory's Latest Report on Regenerative Agriculture*, *supra* note 145.

160. *See* discussion *supra* Section III.C.2.

161. *See Cultivating Resilience: EIT Food's Consumer Observatory's Latest Report on Regenerative Agriculture*, *supra* note 145.