

Factors Causing Food Nutrient Depletion

A vast majority of people, in the midst of their busy lives, must admit that they do indeed take their food supply for granted. They go to the grocery store, they shop for what tastes and looks good (and doesn't break the budget), they shop for their favorite alcoholic beverages, then they stop at the Vape shop on the way home ... and then wonder why they don't feel good. Little do most Americans realize just how much a chronic nutrient deficiency impacts their overall health and puts stress on their entire system as their body's cells cry out for over 90 vitamins and minerals that even the grocery's produce section no longer provides them with. This is why so many people who do realize there's a huge problem are turning to supplements like Shilajit, magnesium, selenium, and various organic/pure vegetable and herbal supplements (e.g., beet root, ashwagandha, etc.).

Here's a comprehensive list of the factors causing modern plant foods to be depleted of - or to have damaged - nutritional value, organized by category:

Soil and Agricultural Practices

1. Soil Depletion - continuous monocropping strips soil of vital minerals like magnesium, zinc, and selenium. Lack of crop rotation reduces microbial biodiversity essential for nutrient-rich plants.
2. Synthetic Fertilizers – these boost growth but do not replenish trace minerals; they encourage fast growth that outpaces nutrient uptake.
3. Pesticides and Herbicides - harm beneficial soil microbes that assist in nutrient absorption. Glyphosate, for example, can chelate minerals and inhibit nutrient pathways in plants.
4. Over-Tillage and Erosion - exposes topsoil to erosion, removing organic matter and nutrients.
5. Lack of Composting and Organic Matter - leads to dead, lifeless soil with reduced capacity to support healthy plant growth.

Plant Breeding and Genetic Modification

6. Selective Breeding for Yield, Appearance, and Shelf-Life – i.e., focus is on size, color, and transportability rather than nutrient density. Modern wheat, corn, and tomatoes have far less protein, vitamins, and antioxidants than heirloom varieties.

7. Genetically Modified Organisms (GMOs) - engineered primarily for pest resistance or herbicide tolerance, not for enhanced nutrition. May reduce diversity of crops grown and indirectly harm soil health through heavy herbicide use.

Industrial Farming Systems

8. Mass Production Techniques – prioritizing of speed and efficiency, often harvesting before ripeness, reducing nutrient content.

9. Hydroponic and Controlled-Environment Agriculture (CEA) - often lacks full-spectrum minerals unless carefully supplemented. Plants grown without soil may not develop natural resistance or antioxidant compounds.

10. Chemical Ripening Agents used to artificially ripen fruit off the vine (e.g., ethylene gas), which results in the reduction of nutrient development.

Post-Harvest Handling and Transport

11. Early Harvesting - prevents plants from absorbing full nutrients in their final growth stages.

12. Long Transport Times and Storage - nutrient loss (especially of vitamins A, C, and B-complex) during weeks of cold storage or shipping.

13. Refrigeration and Preservation Techniques - some methods degrade sensitive antioxidants and phytochemicals.

14. Radiation or Pasteurization for Shelf-Life - may reduce vitamin content (especially vitamin C and B1).

Processing and Preparation

15. High-Heat Cooking and Canning - destroys water-soluble and heat-sensitive nutrients like vitamin C and some polyphenols.

16. Refining and Milling - white flour, white rice, and many processed grains are stripped of fiber, vitamins, and minerals.

17. Preservatives and Additives - may interfere with nutrient absorption or replace whole ingredients with synthetic versions.

18. Oxidation During Processing - nutrients like vitamin E and polyunsaturated fats degrade when exposed to air.

Environmental and Climate Factors

19. Rising CO₂ Levels - faster plant growth under high CO₂ conditions results in “carbon dilution,” lowering protein, zinc, and iron.

20. Climate Change (Droughts, Heatwaves, Unstable Weather) - stress affects plant development and can reduce nutrient density.

21. Pollution and Acid Rain - alters soil chemistry and disrupts nutrient uptake.

22. Heavy Metals and Contaminants in Soil - lead, cadmium, and arsenic in some agricultural regions may displace or block essential nutrients in crops. Some of this heavy metal infusion into the soil is a result of industry pollution, while some people believe that it is primarily resulting from “chemtrails” where high-altitude jets are used to disperse massive quantities of these heavy metals to block sunlight in an effort to slow-down overheating of the Earth’s surface.

Consumer Behavior and Market Forces

23. Market Demand for Perfect Appearance - leads to selective breeding that ignores nutrient content.

24. Lack of Support for Local or Organic Farming - industrial methods dominate due to lower cost and higher yield incentives.

25. Underconsumption of Fresh, Local, and Seasonal Foods - consumers opt for processed or imported produce with longer storage times and lower nutritional value.