

GROWING HEALTHY COMMUNITIES

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Definitions and Expansion of Terms Used Within the Video

Food Shortages

- 95% of the food we eat comes from the soil, but in America alone, 50% of our topsoil has already been lost. (Food and Agriculture Organization of the United Nations)
- Climate change, food, and water scarcity can result in 1.5 million people from Central America and Mexico attempting to migrate to the USA by 2050. (NYT)

Food Sovereignty:

Food sovereignty includes the right of people to control and manage their own food and agriculture systems, including the production, distribution, and consumption of food. It emphasizes the importance of local and community-based food production and the need to ensure that food production is socially just, environmentally sustainable, and culturally appropriate.

Nutrient Deficient

There are several reasons why our food may be deficient in nutrients now:

1. Modern agricultural practices often prioritize high yields and profitability over nutritional quality. As a result, crops may be grown in soil that has been depleted of nutrients, leading to lower nutrient levels in the plants.
2. Many processed foods are stripped of their natural nutrients during processing. For example, white flour is made by removing the outer layers of the grain, which contain important nutrients like fiber and vitamins.
3. Fruits and vegetables are picked prematurely for transportation and storage; they don't have the chance to develop their full nutrient profile. By the time they reach the consumer, they have lost a significant amount of their nutritional value.
4. Environmental factors such as soil pollution, water pollution, and climate change can also affect the nutrient content of food. For example, air pollution can reduce the nutrient content of crops by damaging the plants' leaves.
5. Genetic modifications of crops can alter their nutrient content. While some modifications can increase the nutrient content of crops, others may decrease it.
6. Over-farming can lead to soil depletion, which in turn can result in nutrient deficiencies in crops.

Soil Depletion

- [Top 10 Causes of Soil Depletion - Basic Agricultural Study \(agriculturistmusa.com\) - https://agriculturistmusa.com/causes-of-soil-depletion](https://agriculturistmusa.com/causes-of-soil-depletion)
- Soil's dirty legacy - [Newbie Urban Gardeners May Not Be Aware Of Soil's Dirty Legacy : The Salt : NPR](#)

Water Scarcity

- [Water and the global climate crisis: 10 things you should know | UNICEF](#)
- Lake Mead is dropping to a record low – <https://landsat.visibleearth.nasa.gov/view.php?id=148758>

Water scarcity | UNICEF

- Four billion people – almost two thirds of the world’s population experience severe water scarcity for at least one month each year.
- Over two billion people live in countries where the water supply is inadequate. Half of the world’s population could be living in areas facing water scarcity by as early as 2025. Irrigation and water use - <https://www.ers.usda.gov/topics/farm-practices-management/irrigation-water-use.aspx>

Advantages of Vertical Gardens

- Fresh organics readily available all year round, offers savings as food prices are on the rise
 - The seeds germinate in the rockwool for about 2 weeks until the plant is about 2” tall, then the seedlings are placed in the vertical garden
 - No digging or weeding required, no soil needed
 - Increases yields by an average of 30%, everything grows bigger (University of Mississippi studies)
 - Minimal water usage: Use as little as 2% of the water used by traditional gardening and use a closed-system technology to recycle 100% of its nutrients and water
 - No pesticides, herbicides, fungicides, or chemicals.
 - Low carbon footprint due to zero garden to table miles!
 - Uses 10% of the space/land used by traditional farming (about the size of an end table)
 - Can grow up to 52 plants per square feet per vertical garden
 - Made from high-quality USDA-approved, UV-stabilized, food-grade plastic
 - Can be used indoors or outdoors with water and lights on a timer.
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- When used in schools, they:
 - Provide opportunities for students to succeed at something new and grow their own food.
 - Require no prior gardening experience
 - Can be used indoors in any season
 - Accessible to everyone – positioned at eye-level for most students
 - Easily fit in Classrooms
 - Easy to wheel from classroom to classroom
 - Nurture healthy habits: The more veggies students grow, the more veggies they will eat! It offers food, nutrition, and learning

ADDITIONAL REFERENCES

Progressive plant growing is a blooming business (uses 2% of the water and grows up to three times faster than traditional gardening/farming -

https://www.nasa.gov/vision/earth/technologies/aerponic_plants.html

Yields are 30% higher - <https://www.hindawi.com/journals/ecam/2014/253875/>