Video: To feed nearly 8 billion people, we need to grow more food on less land. Vertical farming could increase yields by up to 700%

Vertical farming is a form of agriculture that grows plants indoors in floor-to-ceiling, tower-like walls of plant-holding cells. Instead of growing plants in horizontal fields on the ground, as in traditional farming, you can think of vertical farming's "fields" as standing on edge and extending upward toward the ceiling.

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Crop yields with vertical farming far exceed what's possible with traditional agriculture. Plenty, Inc.'s Shireen Santosham notes that the highly controlled growing environment of vertical farming has allowed her company to reduce the growing time for some crops to as little as 10 days. Without needing to consider weather or even sunlight, combined with the ability to operate 365 days a year, their system increases the potential annual yield by about 700 percent.

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The land requirement for vertical farming is a mere fraction of that for traditional agriculture. Santosham says it can be done in a building the size of a big-box retail store that can be built pretty much anywhere that has adequate utilities, including within major urban centers. The tightly controlled environment of a vertical farm should also eliminate the need for applied pesticides.

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