



Dr. Dickson Despommier

Skyfarmer

EXCLUSIVE

Like a modern day Jack and the Beanstalk, Dr. Dickson Despommier believes the future of food is up.

Vertical farming, literally growing our food supply in high-rise towers, is a progressive alternative to land-intensive agriculture as we know it today, according to Despommier.

A professor of public health in environmental health sciences and a microbiologist at Columbia University, Despommier has worked with agricultural scientists, architects and urban planners to devise the concept of The Vertical Farm—a plan to create agricultural sustainability in the world’s growing urban centers.

By the year 2050, nearly 80% of the Earth’s population will reside in cities. Applying the most conservative estimates to current demographic trends, the human population will increase by 3 billion people during the interim. The world will need new farmland equivalent to 20% more than the size of Brazil to grow enough food to feed them using traditional farming methods. This problem is exacerbated by the frightening prospects of climate change. We are facing an impending food disaster if we continue to be dependent upon horizontal farming.

Despommier argues that we need a combination of new technologies to accommodate another 3 billion people. Vertical farms can be efficient and should be located in the heart of the world’s urban centers to meet demand. They offer the promise of urban renewal, sustainable production of a safe and varied food supply and year-round crop production.

The Vertical Farm vision foresees:

- Continuous crop production yearly where one indoor acre is equivalent to 4-6 outdoor acres.
- No weather-related crop failures due to droughts, floods, or frost.
- All foods grown organically without herbicides, pesticides or fertilizers.
- Virtually eliminates agricultural run-offs by recycling black water.
- Returns farmland to nature, restoring original ecosystems
- Adding energy back to the grid via methane generation from composting non-edible parts of plants and animals.
- Dramatically reduces the use of fossil fuels both in raising food and getting it to market.
- Converting abandoned urban properties into food production centers that are sustainable.
- Creating new employment opportunities.

A native of New Orleans who grew up in California and received his Ph.D. in microbiology from the University of Notre Dame, Despommier has been featured at the distinguished TED lectures and acknowledged as one of 10 great modern innovators by the Chicago Museum of Science & Industry. He has been named “Teacher of the Year” by the American Medical Students Association and has earned the same distinction six times at Columbia University. Despommier has worked 27 years on research funded by the National Institute of Health (NIH).