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AeroFarms to open "world's largest indoor vertical farm"

By [Stu Roberts](#) - July 9, 2015

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AeroFarms uses "aeroponics" to grow crops, which employs mist to deliver hydration and nutrients to crop roots

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An upcoming indoor vertical farm is not only claimed to be the world's largest, but to use cutting edge growing technology. AeroFarms' new 69,000 sq ft (6,410 sq m) facility in Newark, New Jersey, will be based in a converted steel factory and will incorporate a new corporate HQ for the firm. It's expected to grow high-quality and healthy produce all year round.

As with the soon-to-start-trading [Growing Underground](#), which is based in formerly disused tunnels beneath London, AeroFarms' new indoor farm will look to serve local markets. This will minimize the farm-to-fork journey and benefit both the environment and the produce itself in the process. Where Growing Underground uses hydroponic technology for crop rearing, AeroFarms uses an "aeroponics" approach.

Similar to hydroponics, aeroponics employs a cloth medium for seeding,

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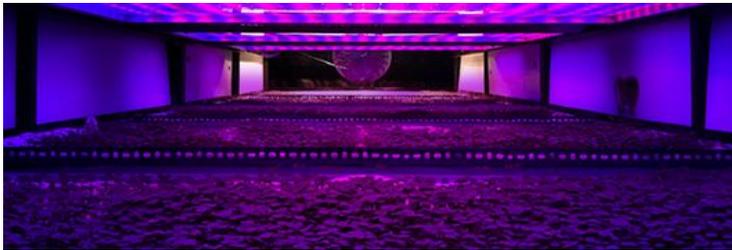
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germinating and growing crops and LED lighting for photosynthesis. Specific wavelengths of light are targeted to help to maximize photosynthesis efficiency and to minimize energy consumption. The major difference between the two growing systems is that hydroponics uses a liquid solution to deliver hydration and nutrients to crop roots and aeroponics uses mist. AeroFarms says this produces faster growing cycles and more biomass than other approaches.

The new facility is a public-private partnership and has been variously funded by the City of Newark, the New Jersey Economic Development Authority (NJEDA), Goldman Sachs, United Fund Advisors, Dudley Ventures and Prudential Financial. Designed by KSS Architects, it offers a controlled, safe and sanitary environment in which to grow crops without the need for sun or soil.



In addition to faster crop cycles and the ability to grow crops all year round, the benefits of this sort of farming are said to include the elimination of pesticides, increased produce shelf-life, a reduced contamination risk through the lack soil used, the production of clean and dry produce at the point of harvest and minimized wastage through the use of a closed-loop irrigation system (one that repeatedly recycles any run-off water). In addition, the modular vertical stacks used for growing the crops make the operation highly scalable.

AeroFarms says its approach to farming is 75 times more productive per square foot annually than a traditional field farm and uses over 95 percent less water. Once up-and-running, it estimates that the new facility will have the capacity to grow up to 2 million pounds (910,000 kg) of baby leafy greens and herbs every year.

The groundbreaking ceremony is today with the first phase expected to open by the end of 2015.

Source: [AeroFarms](#)

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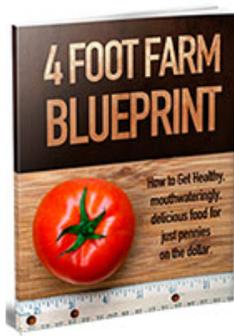
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Stu is a tech writer based in Liverpool, UK. He has previously worked on global digital estate management at Amaze and headed up digital strategy for FACT (Foundation for Art and Creative Technology). He likes cups of tea, bacon sandwiches and RSS feeds.



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Be interesting to see if this comes off as planned, or proves to be a huge flop. Personally I'm hopeful for it.

Mattil

Photosynthesis powered by LED lighting, so you're basically eating electricity.

It would be interesting to see an accounting of the total water and energy costs of both this method and "natural" farming compared.

Wombat56

Longer shelf life? Is that because they need to use more fungicides than planting outside in the soil.

catonb

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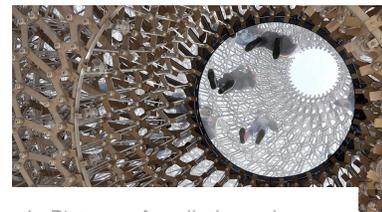
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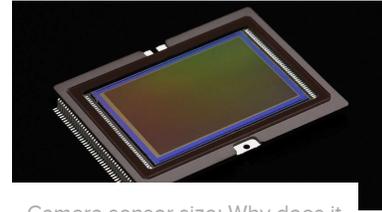
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