Vertical Farming

Posted by Yankee on June 27, 2005 - 12:12pm

Update: Today Treehugger has a post about an Israeli company that already has a (limited) vertical farming module that's ready to go.

Original Post: A lot of you have probably already seen this, but...

Vertical farming. Holy awesome concept! I've been obsessing about how a place like NYC will remain sustainable after the disappearance of cheap oil renders the transportation of food into a place like the *island* of Manhattan infeasable. Could this be the answer? We certainly already have the relevant-sized buildings. (And notice that this project comes out of Columbia University.)

I haven't read the whole thing yet, but one commenter on WorldChanging points out that the Vertical Farming people don't really address the issue of sunlight.

> I spent like 30 minutes on the site looking for what their solution is to SUNLIGHT. Vertically stacking the farms means that only the top level gets much sunlight - the rest are in deep shade.
>
> But apparently this problem never occured to them... in their hydroponic section they mention that artificial light is no replacement for sunlight, but they didn't follow up on that comment.
>
> A quick back of the envelop calculation will show you that trying to use artificial lights would draw so much power you'd quickly become the largest single user in the city. They claim that 3M square feet will feed 10,000 people. To light 3M square feet at solar intensities ($>1000W/m^2$) would require at least 278MW. Assuming light 12h/day, that works out to 334kW/h per day per person, which is about 100 times (!!!) more than a typical household.

(Another commenter responds that certain types of mirrors might be the solution to this problem. Yet another says they can just place the crops that need heavy sunlight in south-facing windows.)

Anyway, undoubtedly there are still all sorts of problems right now, but I really like the sound of this project.

Via Treehugger, Gristmill, BoingBoing, WorldChanging

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