the THEORY behind the CONCEPT of VERTICAL FARMING
what's all the hype about?
by 2050 the human population will increase by 3 billion and 80% of people will live in cities.
currently, traditional agriculture makes it difficult to achieve profitability, distances customers from their food and hurts the environment.
the fact is that **bad weather** makes farming difficult, risky and uncertain. Millions of tons of valuable crops are lost to hurricanes, floods, long-term droughts, and monsoons **every year**
so what is the solution? how do we revolutionize the food system? a new kind of farming has to emerge

urban farming

sky farming

vertical farming
THE URBAN FARM

Shenzhen & Hong Kong Biennale of Urbanism/Architecture
THE URBAN FARM

Urban Farm Brooklyn, New York
THE SKY FARM
THE SKY FARM

La Tour Vivante | SOA Architects

Dragonfly | Vincent Callebaut
THE VERTICAL FARM

Growing Power | Will Allen
HORIZONTAL VS. VERTICAL

9 acres in a horizontal farm...

equals 1 acre in a vertical farm...

27 vertical farm acres is equal to 243 horizontal farm acres.
COMMUNITY INTEGRATION
what do we get out of it?

How can the vertical farm design target each of these groups within the community?
THE “U-PICK” SYSTEM
level of integration: high

Urban Farm, Urban Epi-center | Jung Min Nam
Vertical Farm | Victorian Eco Innovation Lab
THE FARMERS MARKET
level of integration: medium
THE EDUCATION LAB
level of integration: medium
THE EXPORT SYSTEM
level of integration: low
VERTICAL FARMING FOR THE COMMUNITY