

AeroFarms Takes New Agricultural Paradigm of 75 times Greater Productivity with 95% Less Water to Washington

DOC A

January 19, 2016

In order to feed a human population predicted to reach 10 billion by 2060, we are going to need to grow more food. Historically, increased food production has always been at the expense of the water supply. 70% of the world's fresh water is used for agriculture. 70% percent of water contamination comes from agriculture.

Global food production, according to some estimates, will have to double 2005 levels by 2050. It is because of the complex relationship between food and water that AeroFarms set out to transform global agriculture over ten years ago.

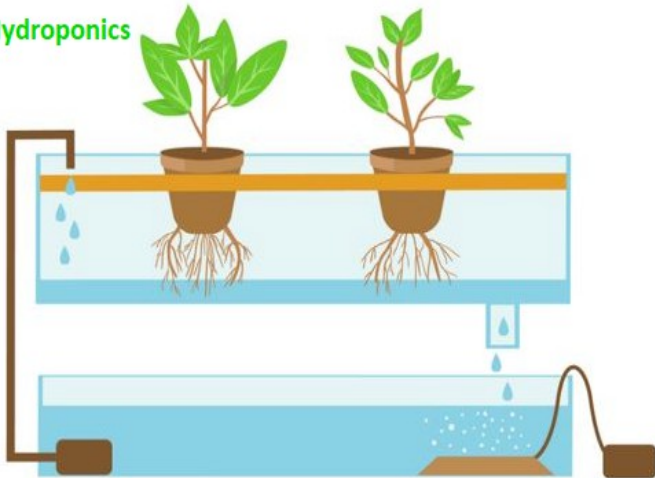
AeroFarms grows leafy greens in a unique aeroponic system that allows the roots to be suspended in midair. LED lights provide energy to the plants, and the roots are misted with a nutrient-rich solution. A closed-loop water circulation system means no water is wasted, resulting in a 95% decrease in water use compared to commercial field farming. Lack of soil eliminates runoff, and because the plants are grown in an entirely controlled environment where Integrated Pest Management (IPM) practices are employed, zero pesticides are used.

AeroFarms is building a brand new state-of-the-art global corporate headquarters in Newark, NJ, that will be home to the world's largest vertical farm. In addition to serving the New York Metro area, they have immediate plans for multiple farms in major U.S. cities and on three other continents, spreading truly sustainable agriculture around world.

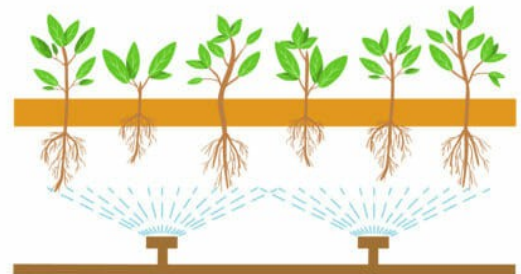
DOC B : plant cultivation techniques

Which technique is used in the text above ? Tick the right answer.

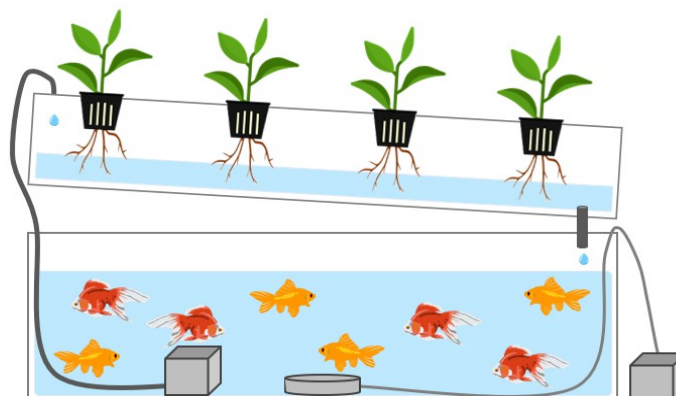
Hydroponics



Aeroponics

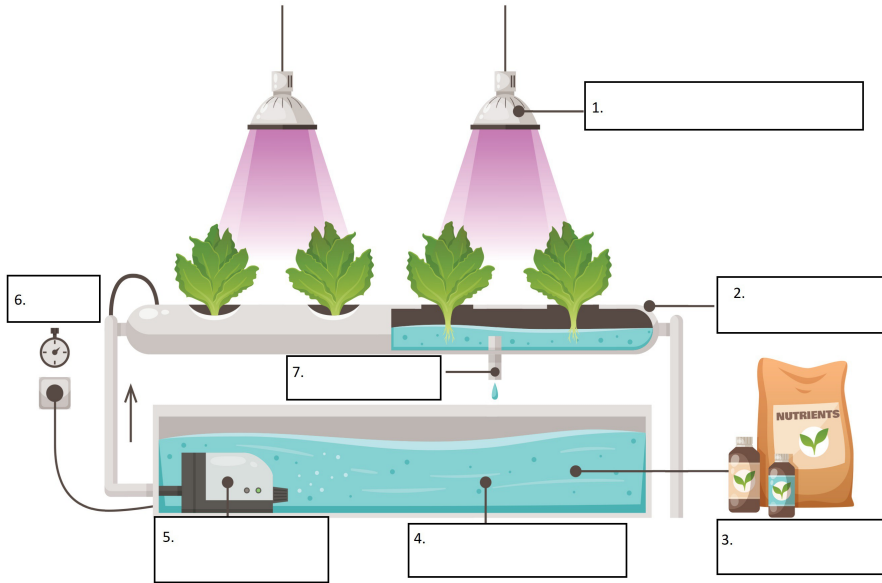


Aquaponics System



Label the drawings below using the elements given.

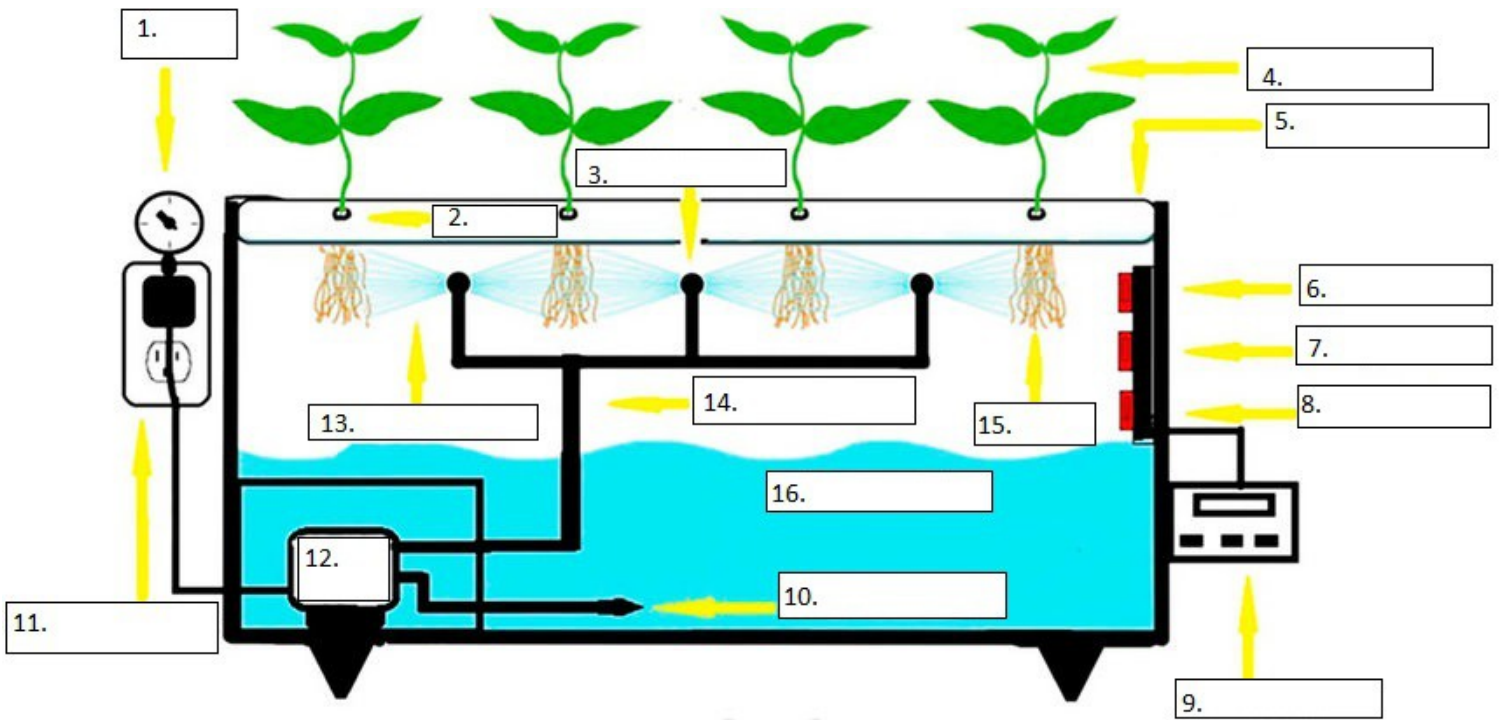
HYDROPONICS



WORD BOX :

- NUTRIENTS
- NUTRIENT SOLUTION
- TIMER
- LED LIGHT
- NUTRIENT PUMP
- DRAIN TUBE
- GROW TRAY

AEROPONICS



WORD BOX :

- | | | |
|---------------------------|-------------------------|------------------------|
| CONTROL SYSTEM | NUTRIENT SPRAY ON ROOT | TIMER |
| PRESSURE PUMP | PLANT HOLDER | ATOMIZATION NOZZLES |
| ELECTRICAL CONTROL SYSTEM | WATER NUTRIENT SOLUTION | |
| NUTRIENT DELIVERY LINE | PLANT ROOT | PLANT |
| NUTRIENT SUCTION LINE | HUMIDITY SENSOR | TEMPERATURE SENSOR |
| PLANT SUPPORTING TRAY | | LIGHT INTENSITY SENSOR |