

Hydroponics

A multi-tiered hydroponic system is shown, featuring several horizontal white PVC pipes. Various green leafy plants, including basil and lettuce, are growing out of the pipes. The system is supported by wooden frames and is set up in a greenhouse or indoor growing area. The plants are healthy and vibrant green, indicating a successful hydroponic setup.

Green is good

Who would use hydroponics?

In 2001 researchers found out that a lot of food around the world is grown using hydroponics. Commercial growers use hydroponics. They do this because it grows food faster and the food is bigger. Hydroponics is a subset of hydroculture, the method of growing plants without soil, using mineral nutrient solutions in a water solvent. Terrestrial plants may be grown with only their roots exposed to the mineral solution, or the roots may be supported by an inert medium, such as perlite or gravel. According to

Commercial growers: A farmer who grows a specific crop.

Mineral nutrient solutions -A substance that provides nourishment essential for the maintenance of life and for growth.

Terrestrial plant -on or relating to the earth

Inert medium -an agency or meaning of doing something

-Emily

In the greenhouse we did lots of things. We always measure the PH and EC these were measured to see if the plants were doing ok and had enough nutrients. We also measured how many cm the plants were on the first day the plants were the tomato was 8.5 ,bean 9.1) was 220 cm , bean (2)170 ,hot peppers 5.5 ,cucumber (1) 8.5 ,cucumber (2) 9 ,sweet pepper 5 by the end we saw a huge comparison .We also saw whiteflies so we to use a yellow strip which attracted the flies and then stuck it to the yellow sticky. After a few weeks we had to get rid of the cucumber since the whitefly in the picture i am measuring the pc level we are making sure there are no whiteflies.Whiteflies can injure the plant and even kill them



Rachel

Why is Hydroponics used?

Hydroponics eliminates soil and soil-borne pests and disease, so there is no need to use large amounts of pesticides. This, in turn, reduces soil erosion as well as air and water pollution. ...

Reducing pollution is vital to protecting plants and animals indigenous to areas near farms.

Ethan

WHERE IS HYDROPONICS USED?

Hydroponics can be used in various places. Such as, rooftops, patios, restaurants, and even in a closet. Hydroponics plants can be grown to be high in nutrients. They also grow quicker than soil-based plants, plus grow year-round, and lastly use 90% less soil than soil based plants.

Zach

WHAT IS HYDROPONICS?

Hydroponics: the process of growing plants in sand, gravel, or liquid, with added nutrients but without soil.

Zach




~In this picture we analyzed the plant to see the growth of the leaves and if there are whiteflies.

Zach



~In this photograph we searched for whiteflies and watered the plants.

Rachel



---Ethan measuring the PH

---Karissa and Rachel

HOW DOES HYDROPONICS WORK

Hydroponics does not use soil, instead the root system is supported using an inert medium such as perlite, rockwool, clay pellets, peat moss, or vermiculite.

a yellow or brown mineral found as an alteration product of mica and other minerals, and used for insulation or as a moisture-retentive medium for growing plants.

In chemistry, the term **inert** is used to describe a substance that is not chemically reactive. The noble gases were previously known as **inert** gases because of their perceived lack of participation in any chemical reactions.

A form of obsidian consisting of glassy globules, used as insulation or in plant growth media.

---Karissa and Rachel

WHAT DOES HYDROPONICS LOOK LIKE IN THE WMS GREENHOUSE?



HYDROPONICS IN THE GREENHOUSE.

A close-up photograph of a person's hand holding three ripe, red tomatoes. One tomato is cut in half, revealing its internal structure. The background is a blurred outdoor setting with green foliage and a building. A text overlay is present in the upper left, and a white box with text is in the lower left.

These are some things that
grow in hydroponics

Tomatoes----->>>

What measurements were taken?

[illegible]