



What is Aquaponics?

Aquaponics is a food production system that links hydroponic crop production with aquaculture (fish farming). Unlike open-water aquaculture, aquaponics generally operates on land, and results in production of a food crop. Aquaponics is not a new concept; crops and fish have been grown together for many centuries. However, aquaponics systems are becoming very popular due to their efficiency, high productivity, and minimal impact to the environment.

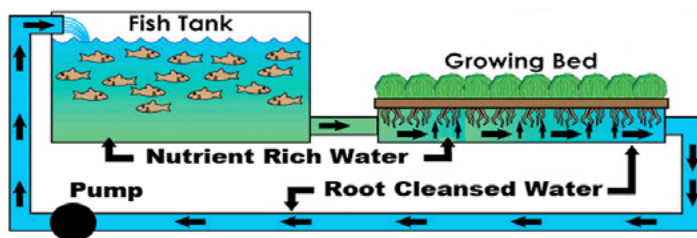
How Does Aquaponics Work?

Aquaponics takes advantage of the fact that plants can thrive in the nutrient-rich water from fish ponds. Plants and associated microbes convert byproducts such as ammonia and CO₂ to beneficial products such as nitrate and oxygen, in a semi-closed system.

There are both freshwater and saltwater aquaponics systems. Some are more advanced than others, incorporating various types of pumps and filters to recirculate water and optimize conditions, and to maximize water recycling. In most systems, plants are either grown in beds on soilless growing media such as that used in hydroponics, or on floating “rafts” above the water.

Can an Aquaponics System be Certified Organic?

Some organic certification agencies will certify aquaponics and hydroponics operations. To be sure that your system will be constructed with approved materials and operated in



a manner that allows it to be certified, check with the organic certification agency prior to constructing the system.

BE AWARE – Aquaponics is regulated in Alaska

To ensure that your aquaponics system is legal, check with the Alaska Department of Fish & Game. Growing fish for human consumption (including by aquaponic methods) is NOT legal in the State of Alaska, and the importation and transport of most live fish in the state is prohibited without a permit. Fish that are strictly ornamental (such as goldfish) and not raised for human consumption or sport fishing purposes may be imported into the state and used in a closed system, but they may not be reared in or released into the waters of the state. Fish wastes and wastewater from ornamental fish may also not be released to the waters of the state.

Food Safety Concerns:

Aquaponics and hydroponics systems are subject to contamination from pathogens that cause human illness, including e.coli, salmonella, and listeria. It is very important to use clean municipal or well water as your source water, and NOT surface water or catchment water. Since fish food, growing media, plants, and unsterilized seeds can all introduce pathogens into the system, it is imperative to routinely test the system for possible human pathogens, in order to prevent serious foodborne illness. Maintaining a proper biological and chemical balance in the system is crucial, as is preventing cross-contamination between water, growing media, and plants, especially for crops that are eaten raw.

Important: Be sure to consult with a food safety professional to ensure that your aquaponics or hydroponics system is designed, constructed, and operated in a manner that will minimize food safety hazards!

If you have more questions or request additional information, please contact:

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