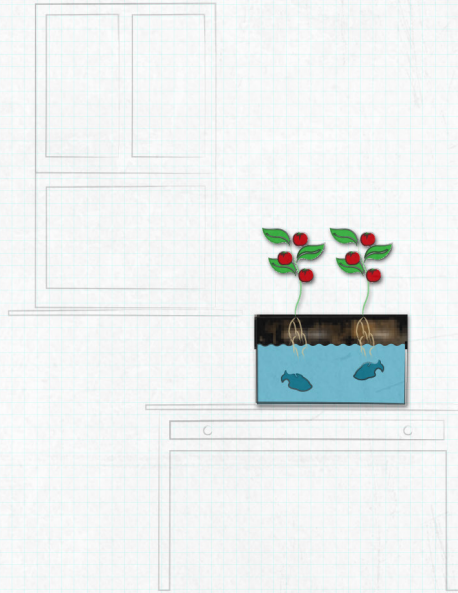


# The 'lay of the land' in aquaponics: Survey finds out who's producing food this way and why

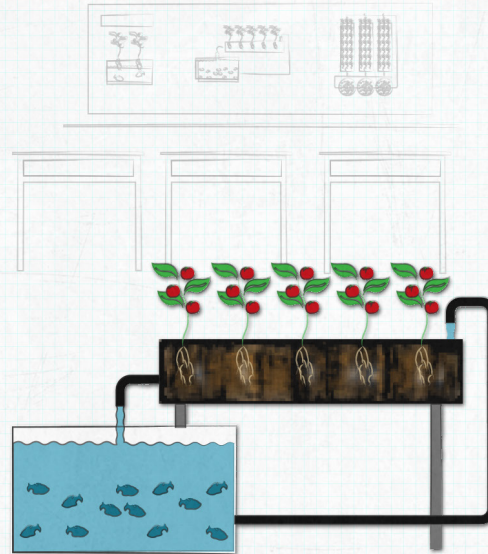
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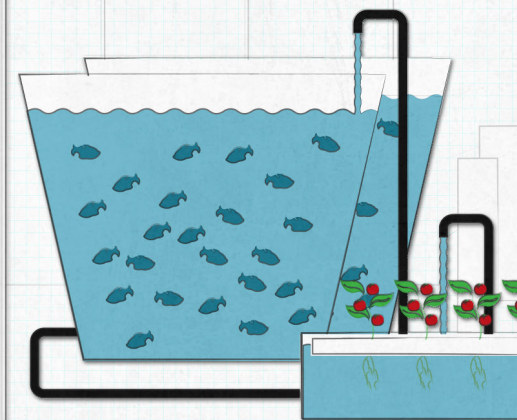
Small-Scale System



Education-Scale System



Commercial-Scale System



**Aquaponics combines hydroponics with aquaculture in a mutually beneficial way**

Aquaponics combines hydroponics (soilless plant farming) with aquaculture (fish farming) in a mutually beneficial way, as fish and bacteria supply nutrients for the plants and the plants clean the water for the fish. The nutrient cycle that is created mimics natural systems.

This study, the first large-scale effort to track aquaponics in the United States and internationally, found that aquaponics is being practiced in at least 43 countries. Most survey respondents were hobbyists, with the remainder being educators, staff at non-profit organizations, or farmers. Respondents were engaged in aquaponics to grow their own food, advance environmental sustainability and improve their health. Many aquaponics practitioners are testing out new technologies related to feed choices and water and energy use.



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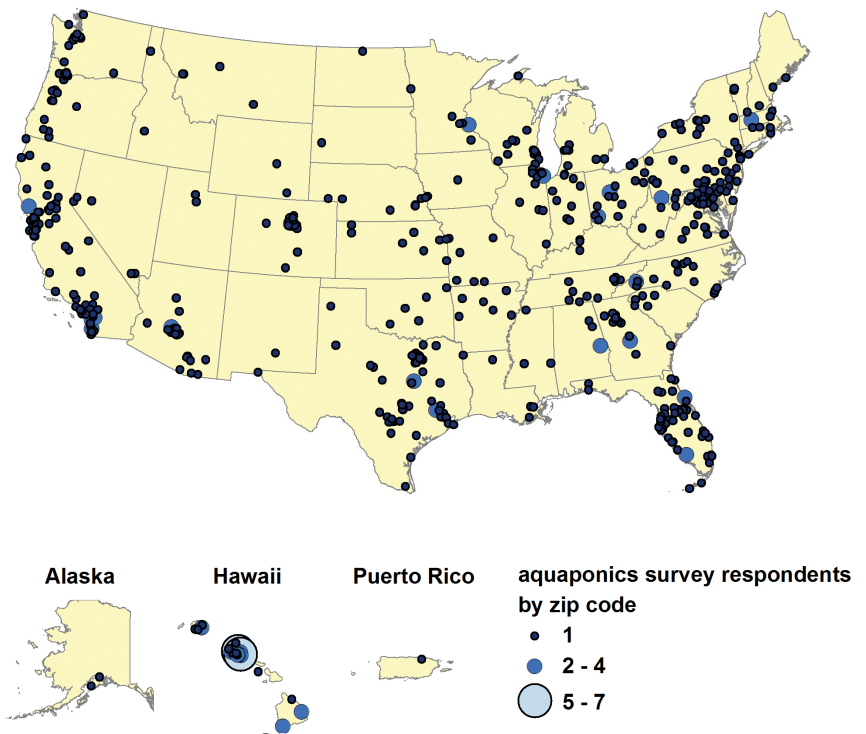
## Key Findings

- Aquaponics is being practiced at various scales and for various reasons, such as personal use, community or economic development, as a teaching tool in science education, or as a way to increase food production in urban areas.
- About half of respondents had three years or fewer of aquaponics experience, and almost 90% had five years or fewer, which demonstrates a recent surge in the number of aquaponics practitioners.
- Eighty-four percent of respondents were hobbyists.
- The median aquaponics system was 15m<sup>2</sup> in size and 500 gallons in volume.
- The most common crops grown were leafy greens, herbs, and tomatoes; and the most common fish species raised were tilapia, ornamental fish, and catfish.
- Thirty-nine percent of respondents captured rainwater for their system; 57% get some of their energy from renewable sources; and 50% supplemented conventional fish feed (pellets) with some type of alternative feed (primarily live feed or aquatic plants).

## Who We Are

Based within the Bloomberg School of Public Health, The Johns Hopkins Center for a Livable Future (CLF) is an academic center that conducts and promotes research and communicates information about the complex inter-relationships among food production, diet, environment and human health.

## Aquaponics survey respondents in U.S. by zip code



## Study Summary

There were 809 survey respondents who met the criteria for inclusion in the study, and 80% were from the United States (the study originated there and was only available in English). The survey explored the production methods, experiences, motivations, and demographics of aquaponics practitioners. It was available online from June 25 to Oct. 1, 2013.

## Strategies for Action

- While most aquaponics enthusiasts are small-scale, the methods are being scaled to commercial-sized systems.
- The study findings can inform research, policy, advocacy and outreach about aquaponics.
- Additional analyses will be conducted on commercial producers, hobbyists, and educators who responded to the survey.

### Full Title:

An International Survey of Aquaponics Practitioners

### Abstract available at:

<http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0102662>