

Growing Fish - Plants in a Aquaponic System

Final Report for FNC04-533

Project Type: Farmer/Rancher

Funds awarded in 2004: \$4,848.00

Projected End Date: 12/31/2004

Matching Non-Federal Funds: \$6,637.00

Region: North Central

State: Illinois

Project Coordinator:

[Lori Bahre](#)

Project Information

Summary:

PROJECT BACKGROUND

The greenhouse is 30 by 58 and the crop grown were tomatoes, peppers and lettuce.

PROJECT DESCRIPTION AND RESULTS

Each grow bed is 14 foot by 16 foot. In the greenhouse we grew as many (12 plants) tomatoes as 50 tomato plants did in the garden. The tomatoes were ready in the greenhouse by the end of April and the garden tomatoes were ready by the first of June. The tomatoes in the greenhouse grew faster and taller than the ones in the garden. The people who tried both tomatoes could not tell the difference between the taste of the greenhouse tomato and the garden tomato. The system worked great to keep the water clean for the fish and to feed the plants all the nutrients that they needed. You had to watch how much water went through the tomato bed; they need to have more air in the roots. The peppers in the greenhouse grew three times that of the peppers that were grown in the garden. The lettuce did not so well because of the heat. The shade cloth helped with keeping the temperature down but with the fans going most of the day the temperature would get to 100 degrees. I plan on seeing how the lettuce will do this winter.

I planted the tomatoes in rock wool at first and it kept the roots to wet and they did not survive, then I planted them in perlite only and they grew wonderfully. They had good color and the blooms were great. I went in and shucked them every week. The peppers grew well in the rock wool and directly in perlite. The lettuce started off good in both the rock wool and just perlite. The fish waste was a real good fertilizer got the plants, they grew like they were in soil, but the stems were stronger from little on with the fish waste. The co-op helped till it was closed this year. This project has helped our farm in going in a different direction on how to grow plants. The farmers market is a good place to sell your product. We made \$800.00 this year and next year we plan on selling more because we will start other plants in the system. Having produce ready early makes people coming back every week. We went to the farmers market from May to the end of Aug.

PROJECT IMPACTED

The people liked the idea that there were not pesticides on their produce. This showed that reusing the water over and over again did not contaminate the drinking water. One of our daughter's teachers at SIU is excited about the greenhouse because he can teach his students about aquaponics and it is close by. Erin Cathcart a friend changed her major to do what I do.

OUTREACH

At our prawn harvest we let people go through the greenhouse. We plan on having the FFA groups and Ag teacher to come out for a day. Who ever is interested in bringing their class out can do so. We would be excited in showing them how an aquaponic greenhouse is like. We have had several persons call about the greenhouse and I helped explain the process to starting an aquaponic greenhouse. We will have tours at our prawn harvest every year.

Project Objectives:

To set up an aquaponics (a circular plant and animal sequence) system that will measure water quality changes as the fish grow, make adjustments in the system to maintain proper growth parameters, and determine the amount of aquatic products that can be harvested from the system.

Research

Participation Summary

Any opinions, findings, conclusions, or recommendations expressed in this publication are those of the author(s) and do not necessarily reflect the view of the U.S. Department of Agriculture or SARE.



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