

“The Challenges and Rewards of Backyard Aquaponics”

By Rick White

I'm going to share a quick story about Aquaponics and my neighbor

Story starts with dogs

My neighbor's pair of "lab" puppies would pull him around the neighborhood

They would stop and say "hello"



Meet Mochi and Nori. Care to guess who is who?

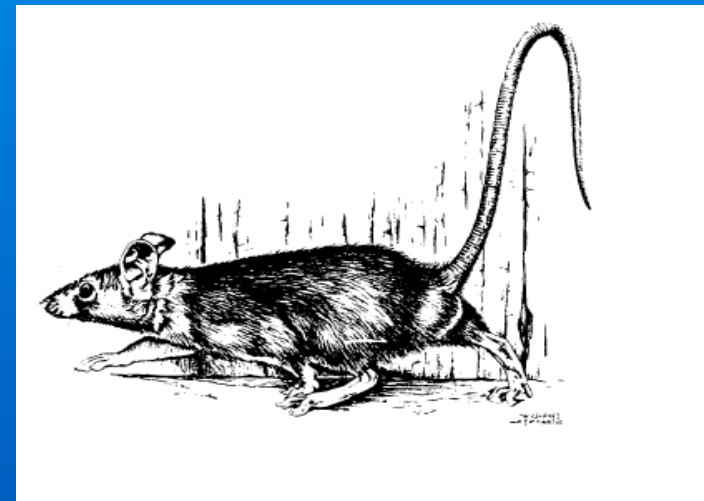
last year I started gardening by creating a simple raised bed garden.



Almost immediately I was introduced to
other neighborhood pets”

Roof rat, or *Rattus rattus*

They loved my Tomatoes



That helped spark more interest in Aquaponics

Emailed Windward about a class
and got a response from Clyde
Tamaru.

Clyde S. Tamaru

Dept. of Molecular Biosciences and Bioengineering

College of Tropical Agriculture and Human Resources

1995 East West Road AgSci 218

Honolulu, HI 96822

Phone:808-342-1063

First Thing I Learned

*First (and most important) Aquaponics
mathematical equation I learned*

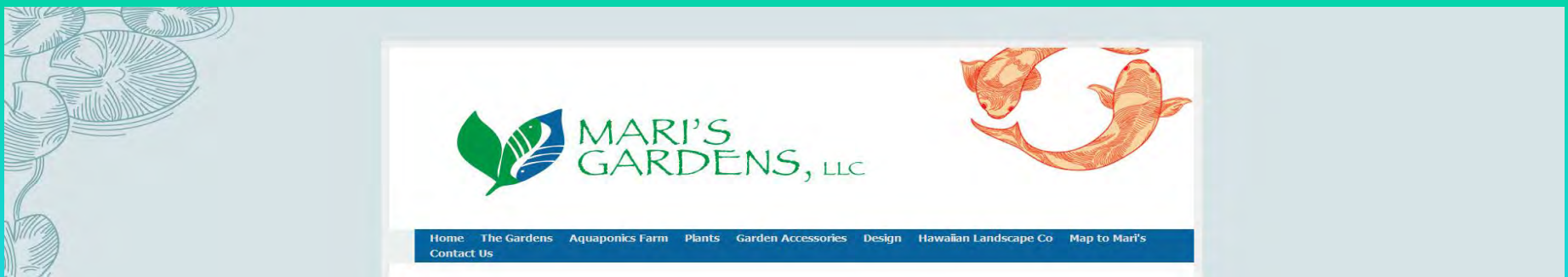
Mochi + Nori =



Backyard Aquaponics

Took a beginners Class at Windward

Great experience and highly recommended!



Took a tour of Mari's Garden with Fred Lau.

A few days later I emailed Fred to ask about his selection of Tomato starters and he told me to come pick some up. I thought that was pretty cool

Told me he was building greenhouses because that was the best way.

Recognition

A comment from Wes in [Mālamalama](#) The magazine of the University of Hawai'i.

- Awesome.
- I have seen all those locations in person and I am completely mesmerized and impressed.
- It's impossible to come away from talking to Mr. Lau and Mr. Tamaru and not want to join in on the future of Hawai'i, and the world.
- They love to teach, and they love to share. Making the world a better place.



One of the most important things I learned from Fred “grow what you like to eat”.

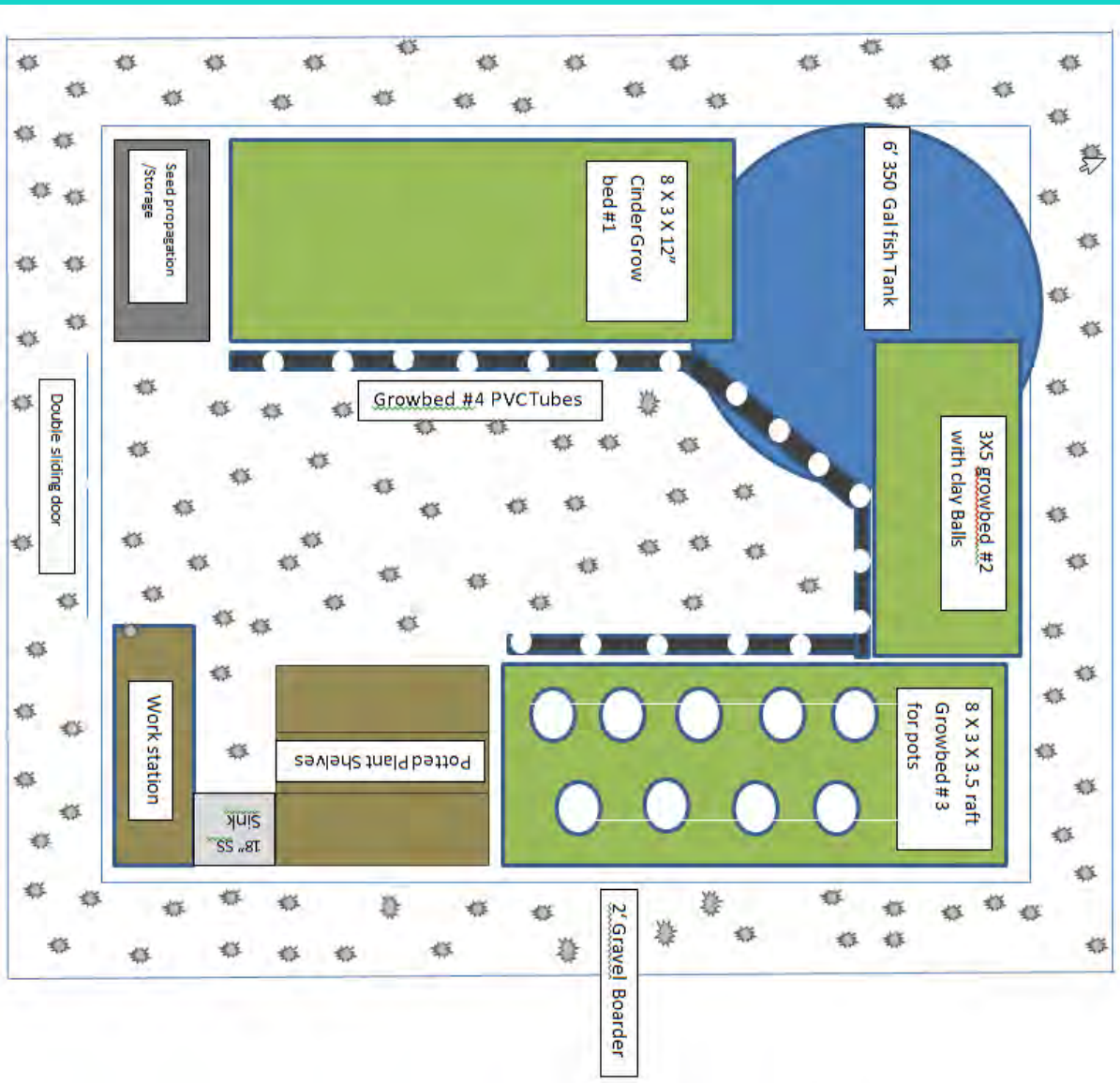
Friends and
neighbors say....



Things I was told
I would grow



Planning the greenhouse



Made a plan

The Layout 12x 16 Costco Tent - Craigslist = 50.00



A little digging...



Notice Anchor pins on each leg



Attach wood to frame

Attached boards with self tapping screws

Anchored all tent poles with 4' concrete pins and/or $\frac{3}{4}$ galvanized Pipe

Add barrier cloth, 18" Galvanized hardware cloth, and Gravel



Throw in a sink, screen cloth, 6 mil plastic, and some green stain



Finished Product



Wood growbeds with plastic liners



NFT (nutrient film technique) system





Free-Flow
10 pot Growbed

Idea from Fred

....and we started cycling and growing (6 months ago)



Lettuce



Cabbage



Broccoli



Strawberries



Mint



Pro-Line
107-5240 3/4"
107-40 3/4"

(Juicy, Fresh, Clean) Cucumbers



Soy Beans



Parsley & Celery



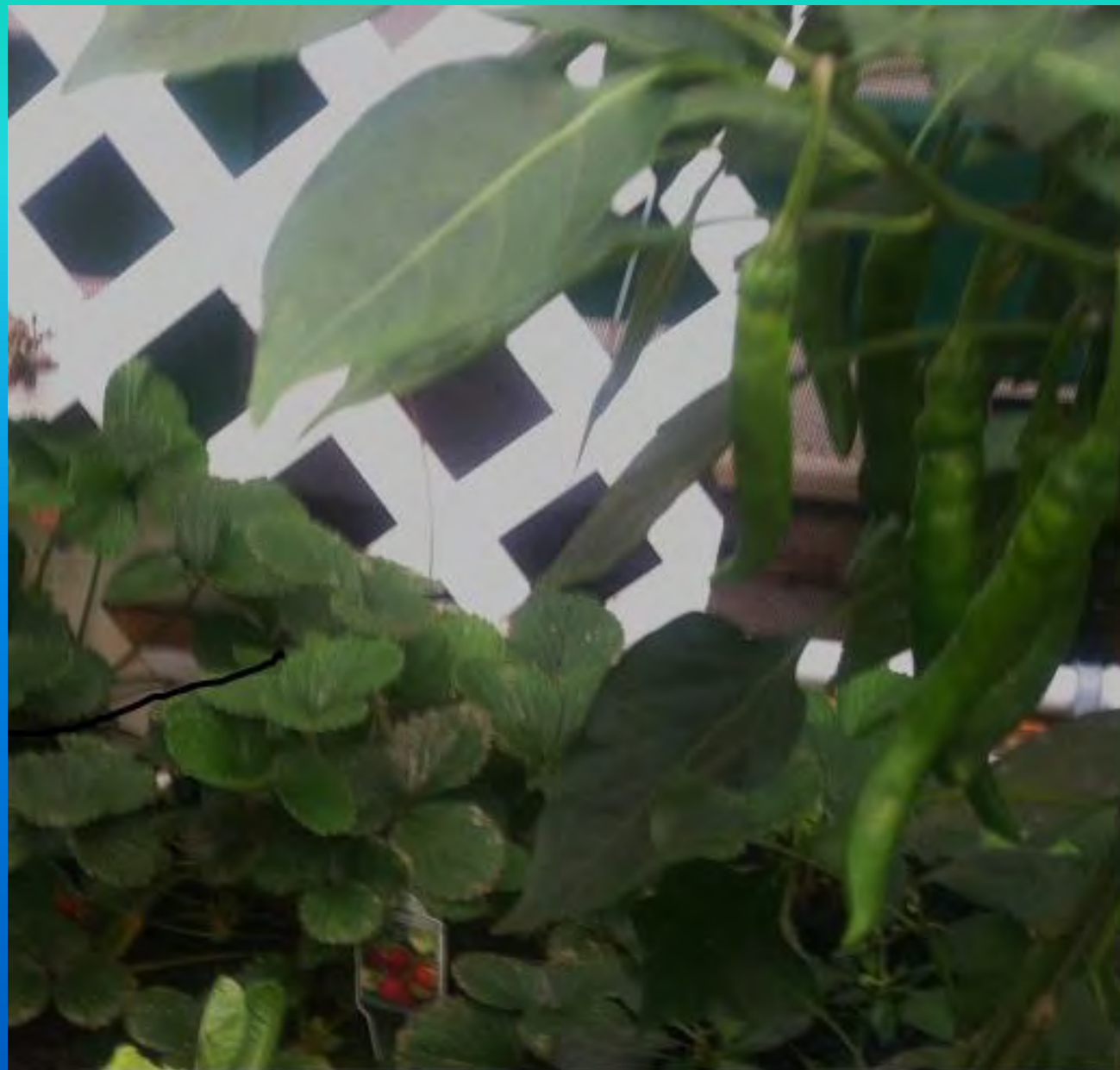
Basil (4 feet high)



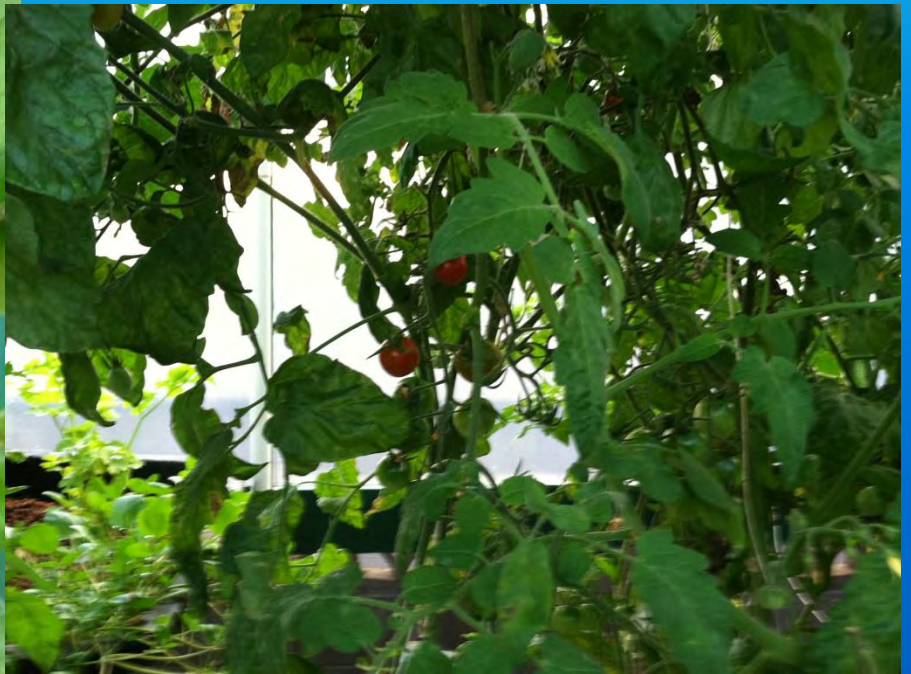
Watercress

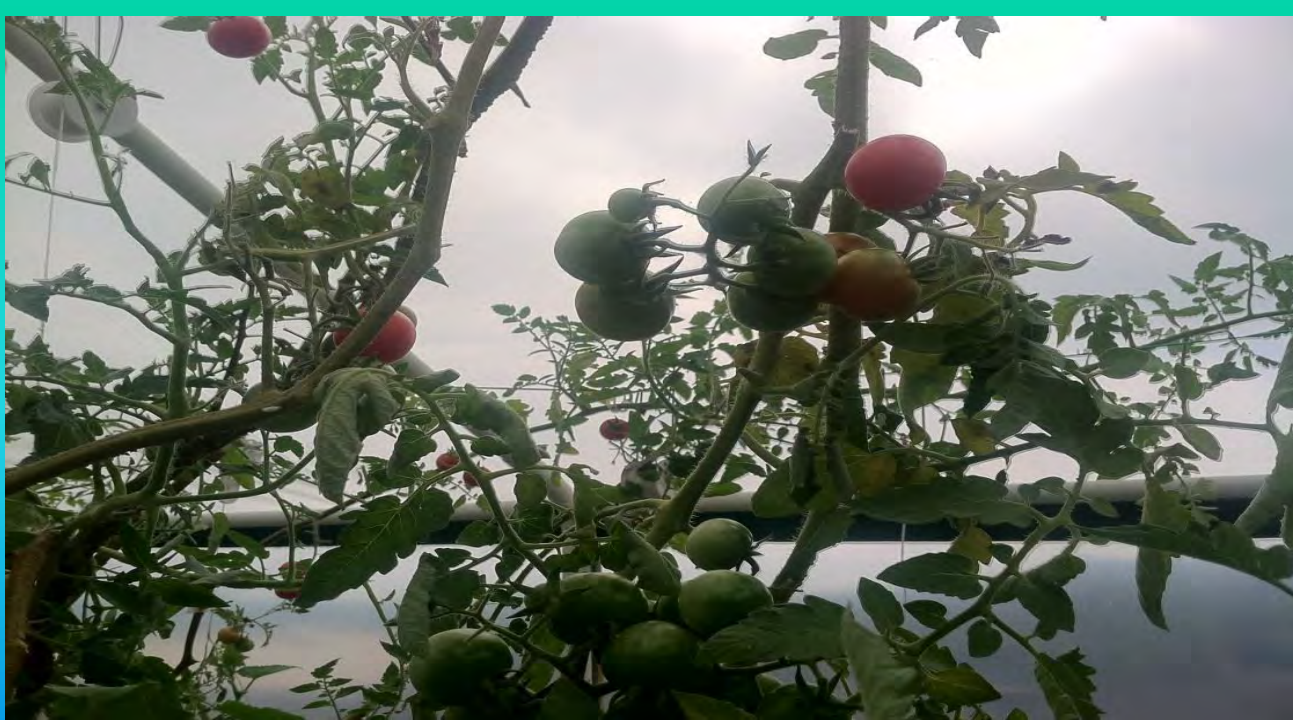


Peppers



Tomatoes





The Most Rewarding Part



Picking your salad!

More..... Corn



... Grapes Blueberries...

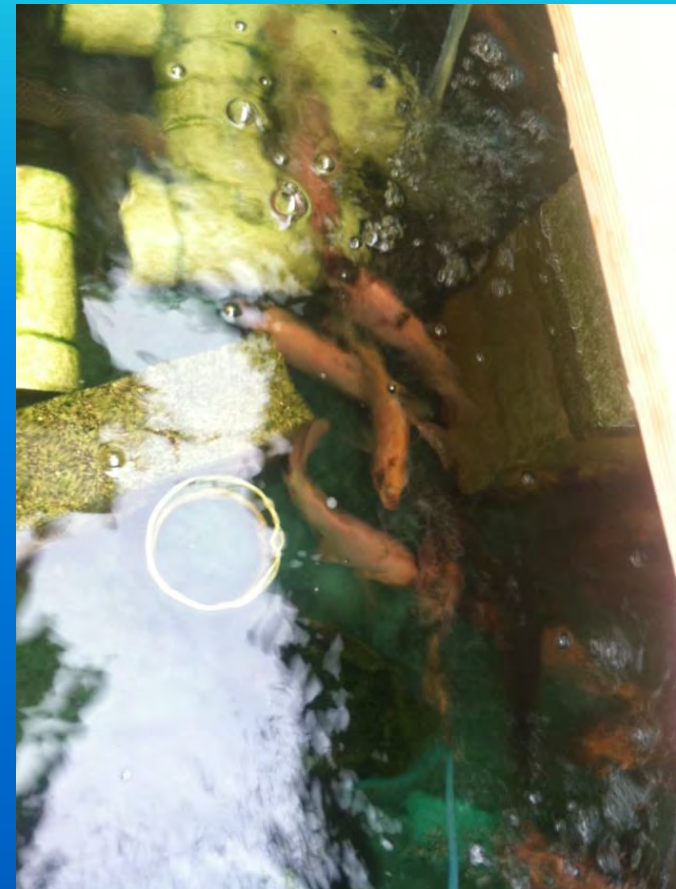


Homemade ...homegrown ingredients



Then there is the fish....

**As a longtime fisherman, I just tell everyone
*"It's Mahimahi".***



In Closing

If anyone needs help in designing or building a simple backyard greenhouse please feel free to contact me.

Rick White

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The End

Mahalo!