

# **AQUAPONICS 101**

## **Teaching with Tilapia and Tomatoes**

**July 10-14, 2023**



**extension**  
ALABAMA A&M & AUBURN UNIVERSITIES

**Sea Grant**  
Mississippi-Alabama



AUBURN UNIVERSITY  
SCHOOL OF FISHERIES, AQUACULTURE  
AND AQUATIC SCIENCES

# Monday, July 10, 2023

## Moderator: David Cline



8:30 - 9:00	Coffee and Pastries	
9:00 - 9:15	Welcome - Housekeeping	
David Cline		
9:15- 9:30	Teacher Pre-test	David Cline
9:30- 10:10	Introduction to Aquaponics	Mollie Smith
10:10 - 10:20	BREAK	
10:20 - 11:00	Integrating Aquaponics into the curriculum	David Cline Stan Arington
11:00 - 12:00	Recirculating Systems Components and Functions	David Cline
12:00 - 1:00	LUNCH On Your Own	
1:00 - 2:15	Aquaculture Station Tour	David Cline
2:00 - 2:30	Sizing the Bio-filter and Worksheet	PJ Waters
2:30 - 5:00	Small System Description and Assembly (break as needed)	Stan Arington Team Leaders

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# Tuesday, July 11, 2023

## Moderator: Stan Arington

8:00 - 9:00	Finish Small System Assembly	Team Members
9:00 – 10:30	Introduction to Water Quality	David Cline
10:30 - 10:45	BREAK	
10:45 - 12:00	Water Quality Hands On	David Cline
12:00 - 1:00	Lunch	
1:00 - 2:00	Water Quality Interpretation	David Cline
2:00– 3:00	Volumetric Displacement Lab	PJ Waters
3:00 - 3:15	Break	
3:15 - 5:00	Hands-on activity or IBC Build	Team Leaders



# Wednesday, July 12, 2023

## Moderator: PJ Waters

8:00 - 8:40	Catch up time	
9:00 - 11:30	IBC Build Time or station activity	
<b>Lunch</b>		
1:00 - 2:15	Starting Plants from Seeds & Hydroponics solutions	Mollie Smith
2:15 - 2:30	BREAK	
2:30—4:00	Physics lesson/lab activity & Discussion	David Cline Team Members
4:00 - 5:00	System Assembly	Team Members

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# Thursday, July 13, 2023

## Moderator: PJ Waters

8:00 - 9:00	System Assembly	Team Members
9:00 - 10:00	Plant Selection for Aquaponics	Daniel Wells
10:00 - 10:15	BREAK	
10:15 - 11:00	Plant Health	Daniel Wells
11:00 - 12:00	Fish in a bottle / Lesson Plans	Stan Arington
12:00 - 1:00	Working Lunch—Teacher lessons from the field	Rebecca Balkcom
1:00 - 2:00	Fish Health, Stress, and Disease	Tim Bruce
2:00 - 2:15	BREAK	
2:15 - 3:00	Catfish and Tilapia Dissection	Tim Bruce
3:00 - 5:00	Hands-on Activity	Team members



# Friday, July 14, 2023

## Moderator: Dave Cline



8:15 - 9:30	Making sure your veggies are safe to eat	Camila Rodrigues Vania Mickos
9:45- 10:30	Scaling –up your Aquaponics Operation	David Cline
10:30- 11:15	Careers in Fisheries/ Aquaculture/ Aquatic Sciences	Group
11:015 - 11:45	Post-test and Evaluations	David Cline
11:45—12:00	Awards Ceremony	Team Leaders
12:00	Adjournment	David Cline

## Workshop Presenters

**David Cline**  
Associate Extension Professor, Aquaculture  
ACES / AU–SFAAS  
Auburn, AL

**Tim Bruce, Ph.D.**  
Assistant Professor, Animal Health  
AU-SFAAS

**Daniel Wells, Assistant Professor**  
Department of Horticulture, AU

**Shima Rezaei**  
Biosystems Engineering

**Daniel Wells - Vertical Gardens**  
**Rebecca Balkcom - AHS Field Trip**

**P. J. Waters**  
Associate Extension Professor  
AUMERC/ Sea Grant  
Mobile, AL

**Stan Arington**  
Visitor Learning Center , Director  
Auburn University

**Mollie Smith,**  
Aquaponics Systems Mgr.

**Camila Rodrigues, Asst. Professor**  
ACES—Specialist, Hort & Food Safety

**Larry Lawson,**  
Superintendent AU Fisheries Station

