

# California

## FARMER

**BSE quake shakes California** Page 8

**Three root rot-tolerant avocados** Page 14

**Grow safe food, guard resources** Page 24

# Go fish



**MEASURING SUCCESS:** Saul Ramos (from left) and Page Coffman are shown with their instructor, Audrey Bonomi, measuring the growth of lettuce under aquaponics.

By **LEN WILCOX**

**A**GRICULTURE students at Sanger (Calif.) High School near Fresno are testing out new techniques for fish farming called aquaponics.

These new techniques are very efficient, reduce environmental concerns and provide a flexible platform that can be scaled from a small system for home use to a large commercial operation. Aquaponics is a system that combines aquaculture, or fish farming, with hydroponics, or growing plants without soil.

### New field

“This is a new field of agriculture, and I’m very excited to be studying something that is so cutting-edge,” says Audrey Bonomi, Sanger Unified School District department chairwoman of the agriculture program. “With the help of John Young and others, we’re developing equipment and techniques that may change how fish are grown for market in this country.”

Young, a Sanger-area grower (J and J Aquafarms) who has been involved with aquaculture since the 1980s, is the technical adviser for the project.

### Key Points

- System joins aquaculture with hydroponics (plants without soil).
- Ag students at Sanger High School are testing new fish-farming methods.
- Aquaponics is a balancing act that is beneficial for farmers and fish.

“Aquaponics makes sense,” says Young. “The fish waste is a rich resource for the plants, and using the water for the plants cleans and oxygenates the water for the

fish. It’s an environmental balancing act that is mutually beneficial.”

With this collision of needs, fish farming is a booming new ag subset. Worldwide, aquaculture is growing at a rate of 6.5% per year, according to Fisheries Technologies Associates Inc. The 2007 USDA Census of Agriculture reported freshwater aquaculture sales of \$1.415 billion. California had \$102.2 million of those sales, making it the fifth-largest state in aquaculture.

*Wilcox writes from Sanger.*

■ **Read more on aquaponics on Page 4.**



**(530) 846-5625**  
286 West Evans, Reimer Rd.  
Gridley, CA 95948

Shakers • Low Conveyor • Bin Carrier Platform  
PTO & Self Propelled Harvesters (Du-All) • Bank Outs  
Hydraulic Elevators • DOV Raisin Harvesters • Sweepers  
V-Sweeps • Cablesweeper • Side Shooter • Nut Carts



*The COMPLETE Orchard Harvesting System*