

Summer 2004

# Irrigator

Newsletter of the Westlands Water District

## NEWEST CROP REPORT SHOWS STRONG TREND TOWARD PERMANENT CROPS

Each spring, large swatches of Westlands Water District are aflame in brilliant whites and pinks as nut and fruit tree orchards begin their annual cycle of life and productivity. This pageant of color is becoming an ever larger display as more and more farming operations invest in permanent crops like fruit and nut trees to diversify their crop portfolio.

"The trend to more and more permanent crops is very encouraging for farming in Westlands," said Thomas Birmingham, General Manager of the District. "One of the main reasons for this trend is that our water supply has become more stable and dependable in recent years. Planting vineyards and orchards requires confidence that the water these crops require will be available well into the future."

Since the early 1990s, as California emerged from a major drought, the number of acres planted in permanent crops – fruit and nut trees and vineyards – began to slowly increase. The trend has accelerated in recent years, as the District's water supply outlook has improved.

**"THE CONNECTION IS UNMISTAKABLE. WHEN THERE IS A RELIABLE AND ADEQUATE SUPPLY OF WATER, THE FARM-BASED ECONOMY WILL THRIVE."**

Wendy Illingworth  
Economic Analyst

Since 1993, the number of acres planted in trees and vines has more than doubled in Westlands to some 64,000 acres.

In just the past three years, the number of acres devoted to permanent crops increased by more than 15 percent, while field crops declined by almost 8 percent. (The total number of acres planted in field crops still significantly outweighs the acres in permanent crops - 437,000 acres compared to 64,000 acres.)

The demand for young almond trees is currently so strong, area nurseries are telling farmers it will be 2006 or later before they can deliver trees ordered today.

This trend towards permanent crops is closely linked to the District's water supply. During the first half of the 1990s, regulatory constraints on the Central Valley Project kept water allocations to west side farmers at very low levels. From 1990 until 1995, south-of-the-Delta CVP contractors saw average allocations of only 38.5 percent. The situation improved significantly in the later half of the decade as CVP contractors south of the Delta saw average allocations of better than 90 percent.

"The connection is unmistakable. When there is a reliable and adequate supply of water, the farm-based economy will thrive," Birmingham said.

As the water supply picture has improved, so has the economic outlook for west side communities.

"There are distinct advantages to growing the higher-value permanent crops, both for farmers as well as for the communities that support the agricultural economy on the Valley's west side," said economist Wendy Illingworth. "On-farm incomes are higher, employment patterns are more stable and there is more long-term work for workers and farm-related businesses."

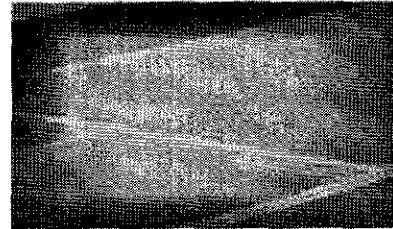
Illingworth predicted this trend toward more permanent cropping patterns in her exhaustive 2003 economic impact report on the District's land retirement program. As the District acquires and fallsows land, additional water supplies become available for the other lands remaining in production. These additional supplies contribute to confidence in the future of farming in Westlands and that results in farmers making the longer-term investment in permanent crops.

Since Illingworth published her economic impact report, Westlands has purchased approximately 55,000 acres of drainage-impacted land. The District plans to purchase an additional 45,000 acres over the next two years.

According to the 2003 crop report, the greatest decline in acres devoted to field crops has occurred in Acala/Upland cotton. In just the past three years, the acreage devoted to Acala/Upland cotton declined by more than 58,000 acres or 32 percent. Other significant declines occurred in garbanzo beans, which dropped nearly 7,000 acres or 66 percent since 2000. Sugar beets saw a 42 percent drop in acreage, process tomato production dropped by seven percent and the acreage in alfalfa seed declined 89 percent. At the same time, farmers in Westlands planted an additional 8,376 acres in almonds for an increase of

29 percent. Pistachio trees covered an additional 6,027 acres between 2000 and 2003 for a 117 percent increase. Table grape production in the District grew by 22 percent since 2000.

As the statistics suggest, almonds are leading the march to permanent plantings in the District. Almond trees in Westlands out produce all other regions of California. In fact, almond trees in Westlands regularly produce 4,200 pounds per acre – nearly double the statewide average.



"Westlands is a dream come true for almond farmers," said Ross Borba, a principal in Borba Farms. "The climate, the soil and the expertise farmers have in water use and conservation makes this region remarkably productive for almonds."

Borba said many Westlands farmers were unwilling to make the investment required to switch to permanent crops when the water supply outlook was bleak. And, he said, there are other factors in today's farm economy that are helping farmers overcome their resistance.

Many farmers who grow cotton are concerned there will be changes in international markets for cotton that could be detrimental to U.S. producers. And despite continuing increases in production, prices for almonds remain strong.

"The almond industry has done a very good job developing new markets for almonds, both here in the United States and abroad," Borba said. He noted that California is expected to produce a record 1.1 billion pounds of almonds in the coming year.

"The farmers who made it through those really bad water years are starting to see a little brighter future," said Borba. "They are survivors and survivors tend to be a pretty optimistic group by nature."

### GROWING IN ALMONDS LEADS PARADE OF PERMANENT PLANTINGS



On May 10, the California Agricultural Statistics Service announced its forecast for the 2004 almond crop weighing in at 1.7 billion pounds. The forecast is up 10 percent from California's almond production with grow 8.6 percent over the previous year.

Overall, a bumper crop like the 2004 almond forecast would be followed by a sharp drop in prices as producers and buyers alike anticipate an oversupply.

But almond in California aren't like other crops. Prices have remained relatively strong despite the increase in production. In April, Northern Superior almonds prices hit \$2.35 per pound, largely because of strong worldwide demand, aggressive marketing programs, a new U.S. dollar and a disappearing Spanish coin.

According to the Almond Board of California, the state produces more than 80 percent of the world's almonds and nearly 100 percent of the almonds consumed in the United States.

### STATEWIDE ALMONDS WERE WORTH MORE THAN \$1 BILLION DOLLARS IN 2003 AND REPRESENT THE STATE'S NUMBER ONE AGRICULTURAL EXPORT

California Department of Food and Forestry

Statewide, almonds were worth more than \$1 billion dollars in 2003 and represent the state's number one agricultural export. Fresno County farmers produced 590 million worth of almonds in 2003 on 15,000 acres. About half of that production took place in Westlands, the most productive almond producing region in the state.

The combination of strong demand and stable prices has helped to fuel the trend toward more permanent crop plantings in Westlands. Between 2001 and 2003, farmers added more than 6,000 acres of almonds.

**PERMANENT CROPS GOOD  
NEWS FOR WESTSIDE ECONOMY**

**SHIFT IN CROPPING  
PATTERNS BRINGS  
SHIFT IN WATER DEMAND**

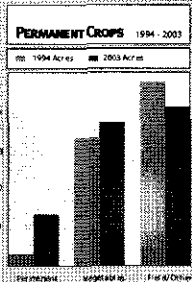
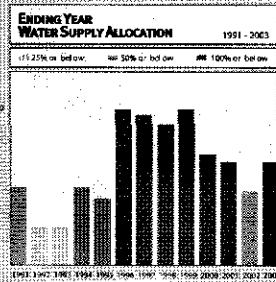


In the spring of 2003, Westlands Water District unveiled a detailed study that examined the likely economic impacts of a proposal to purchase up to 200,000 acres of drainage impacted farm land, take them out of production and reallocate the water to the remaining lands. The study determined that after an initial period of dislocation, stabilizing the District's water supply would likely result in farmers investing in higher value permanent crops, such as fruit and nut trees and vineyards.

According to the latest crop report, the movement appears to be happening already.

"It should not come as a surprise to anyone that farmers, if they have the water they need, will move into crops with higher returns," said Wendy Illingworth, author of the ground-breaking 2003 Analysis of Economic Impacts of Proposed Land Retirement in Westlands Water District. "That's good news for farmers and good news for the communities on the west side."

Permanent crops such as almonds have a number of distinct advantages for communities. While the total number of workers needed at harvest may be fewer than with field crops, permanent crops require more year-round work. Workers and communities face fewer of the boom-bust cycles that keep west side unemployment figures high. Agriculture related businesses, such as equipment providers, also do better because permanent crops create more stable, long-term economic foundations upon which small businesses thrive.



Westlands farmer Vince Marshall of Gagnant Farms said shrinking farm profits are putting increasing pressure on farmers to reduce labor costs through technology, more efficient irrigation, and transgenic crops. "On the other hand, permanent crops provide a steadier stream of work with higher wages for workers," said Marshall, who planted just under 500 acres of almonds and 100 acres of wine grapes this past year.

**"IT SHOULD NOT COME AS A SURPRISE TO ANYONE THAT FARMERS, IF THEY HAVE THE WATER THEY NEED, WILL MOVE INTO CROPS WITH HIGH RETURNS"**

In her economic impact study, Illingworth estimated that in 20 years, land retirement would result in gross revenues increasing 40 percent from orchards in Westlands compared to revenues if the District took no action to stabilize water supplies. During the same period, she predicted cotton revenues would decrease 28 percent. Also in this time, Illingworth said total employment in the District would increase by 1,500 jobs.

"When you see farmers putting in orchards and vineyards that won't start producing crops for several years, you are seeing farmers who are generally optimistic about the future. It means they are much more likely to be here for the long haul," Illingworth said.

As more and more Westlands farmers switch to permanent crops like orchards and vineyards, the District can expect to see changes in the way water is used. Virtually all of the new orchards being planted today are being irrigated with highly sophisticated drip systems that allow trees to use more of the water applied compared to other irrigation methods.

"Drip systems can irrigate crops with significantly less water than is required by other more common irrigation methods," said a report by the University of California's Division of Agricultural Services. "For example, young orchards irrigated by a drip system may require only as much as those under sprinkler or surface irrigation."

Orchards and vineyards also have environmental benefits for the District. They generally require fewer pesticides to manage pests and there is less dust associated with cultural practices. In fact, new techniques are being developed for almonds that will further reduce dust during the almond harvest.

The increasing number of acres planted in permanent crops also will require Westlands to monitor demand for water in certain parts of the District. Because the new drip systems deliver smaller volumes of water compared to other systems, the summer crop is only require the systems to run continuously. That means if some areas of the District

become largely devoted to orchards or vineyards, the demand for water could exceed the design capacity of the District's water distribution system.

Currently, a variety of different crops, using a mix of drip and sprinkler irrigation, provides a degree of flexibility that allows the District to balance the demand for water at any given time with the District's ability to deliver it.

**"IT'S NOT A QUESTION OF WHETHER THERE IS ENOUGH WATER... IT'S A QUESTION OF WHETHER THE DISTRIBUTION SYSTEM HAS ENOUGH CAPACITY TO GET IT TO FARMS WHEN IT IS NEEDED."**

THOMAS BETHNER  
Deputy General Manager for Resources

"It's not a question of whether there is enough water. It can sometimes be a question of whether the District's distribution system of pumps and underground pipes that convey water from the CVP canals has enough capacity to get it to farms when it's needed," said Thom Bethner, Deputy General Manager for Resources. "We are currently evaluating individual pipeline capacity and demand to determine where the system may become overtaxed. We owe it to our farmers, some of the most efficient in the world in terms of water usage, to make sure we can deliver the water when and where they need it."

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www.westlands-water.org