



# Santa Cruz Sentinel



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## WATSONVILLE

# Apple growers resilient among challenges



SHMUEL THALER — SANTA CRUZ SENTINEL

Mel LaRussa checks on the Fuji Apple trees at Clearview Organic Orchards in Watsonville, where the drought and lack of frost have caused his trees to fruit a second time this year, but with an unusable crop.

## Better money for berries, warmer weather change landscape

By Emily Benson  
[newsroom@santacruzsentinel.com](mailto:newsroom@santacruzsentinel.com)

**WATSONVILLE** » A century ago, a sign hoisted above Watsonville's Main Street proclaimed it "The Apple City."

These days, however, berries dominate the fields around the city, the majority of the country's apples are supplied by Washington state, and the few apple growers remaining in the Pajaro Valley must contend with soaring land prices and winter temperatures too high for their trees to grow fruit.

The farmers who tend the Pajaro Valley's orchards acknowledge that the apple industry is at a crossroads. As

the world's climate changes, though, the apple growers are changing, too. To survive, they're doing everything from planting apple trees on lawns leased from homeowners to searching for forgotten apple varieties that thrive in warmer weather — to spraying their trees white to keep them cool.

"I don't foresee a bright future for apples in Watsonville — I really don't. But we'll be around," said Mel LaRussa, who with his wife, Carol, owns Clearview Orchards on Trabing Road, a 7-acre organic orchard where people can pick their own fruit.

### March of the berries

The statistics are stark.



KEVIN JOHNSON — SANTA CRUZ SENTINEL

A cyclist rides past one of the apple crate murals that pay homage to the fruit's legacy in Watsonville on Friday.

By the early 1900s, growers had planted apple trees on 14,000 acres around Watsonville. But by the mid-'80s, apple orchards had dwindled to 5,000 acres in Santa Cruz County, and about half that number of acres were dedicated to berries. By 2014, berries were growing

on more than 6,600 acres in the county, while apples occupied less than a third of that area.

The "march of the berries" is probably the biggest threat to expanding apple production around the region, said John Martinelli,

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## CLIMATE AGREEMENT

# Global pact reached in Paris

By Karl Ritter,  
Seth Borenstein  
and Sylvie Corbet  
*The Associated Press*

**LEBOURGET, FRANCE** » Nearly 200 nations adopted the first global pact to fight climate change on Saturday, calling on the world to collectively cut and then eliminate greenhouse gas pollution but imposing no sanctions on countries that don't.

The "Paris agreement" aims to keep global temperatures from rising another degree Celsius (1.8 Fahrenheit) between now and 2100, a key demand of poor countries ravaged by rising sea levels and other effects of climate change.

Loud applause erupted in the conference hall after French Foreign Minister Laurent Fabius gavelled the agreement. Some delegates wept, others embraced.

"It's a victory for all of the planet and for future generations," U.S. Secretary of State John Kerry said, adding that the pact will "prevent the worst most devastating consequences of climate change from ever happening."

Brazilian Environment Minister Izabella Teixeira  
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## ENVIRONMENT

# Acidification poses threat to the Bay

By Bethany Augliere  
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**SANTA CRUZ** » Ocean acidification has been called the "evil twin" of global warming because the same carbon dioxide emissions that cause climate change also dissolve into seawater, threatening the world's oceans. And the biologically rich Monterey Bay is more at risk than most bodies of water.

The reason is that the California Current, spanning the west coast of North America, is acidifying twice as fast as the rest of the world's oceans. Globally, the oceans are already 30 percent more acidic than they were 200 years ago. By the end of the century, scientists say, they are expected to be 150 percent more acidic. But experts predict that Monterey Bay might reach those levels much sooner — in only 35 years.

"If the oceans die, we die," said Jason Scorse, director of the Center for the Blue Economy of Monterey. "And if the oceans die, it's mostly going to be (because of) ocean acidification."

Most of the attention at the international conference on climate change in Paris — which con-

SEAWATER » PAGE 4

## WEATHER

# Third storm in a week to bring rain, snow

*The Associated Press*

**SAN FRANCISCO** » A third winter-like storm in a week will bring rain and possible thunderstorms to much of Northern California and snow to the Sierra Nevada,

forecasters said. National Weather Service meteorologist Nathan Owen said that after a lull Saturday, a system will move into parched California overnight packing precipitation and strong winds.

Owen says the latest storm will dump slightly less rain in the state than the previous systems — with the San Francisco Bay Area and the San Joaquin Valley expected to get up to about half an inch.

"We'll see a very similar storm to what we had the last round with less rain, but we're expecting a good bit of wind for this system," Owen said.

He said winds of up to 55

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### AT THE PUMP

#### Gasoline prices fall to lowest since recession

Average fuel prices are about to tumble below \$2 per gallon in a boost for holiday-traveling consumers. PAGE A2



### A MORE SIMPLE TIME

#### Second Saturday welcomes students

The Second Saturday on the Farm event in Watsonville teaches students about life before technology. PAGE C1

### TRUMP'S PROPOSAL

#### No consensus over legality of Muslim ban

Experts: No Supreme Court case clearly prevents president or Congress from closing borders to Muslims. PAGE A10

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# Apples

FROM PAGE 1

president of S. Martinelli & Co. The famed Watsonville apple juice company buys more than 90 percent of the apples grown in the region, Martinelli said.

Skyrocketing land values are the latest hurdle for apple growers. The U.S. Department of Agriculture reports that the price to lease irrigated agricultural land in Santa Cruz County has increased by about 50 percent since the end of the Great Recession.

Local growers say the price ranges from \$1,500 to \$2,800 per acre each year, depending on the quality of the land.

“As you push land value higher, it becomes less worth it to waste your time trying to get an apple to grow on a tree if it doesn’t want to,” said Freddy Menge, who owns a small orchard on White Road where he grows heirloom apples to sell to specialty food markets and restaurants.

Here’s why: An acre of strawberries or raspberries earns 10 times the gross revenue an acre of apples produces.

## Warming winter weather

Economics is hardly the only obstacle apple growers in the Pajaro Valley face. Simply put: Many varieties of apples don’t want to grow when winter weather is too warm. Apple trees need a period of “winter chill” to reset their growth cycle, though the amount of cool weather they need differs by variety. Without enough chilly days, they won’t blossom normally or produce apples the following season.

Last winter was unusually warm and sunny in Watsonville, with January temperatures about 5.2 degrees higher than the average between 1981 and 2010. Amid fears that the global climate is shifting, local growers worry that balmy winters may become routine rather than the exception.

“I wouldn’t be surprised if a lot of people just quit if we have another winter” like that, said Jim Rider, an independent apple grower in Watsonville. “Certainly the worst in the 40 years I’ve been doing it.”

## Belief in the apples

Still, amid the changes sweeping the Pajaro Valley, apple growers are finding reason for optimism, sometimes in surprising places. If California’s four-year drought lingers on, Martinelli said, the intense water demands of berries will mean that at some point farmers will have to devote more of their land to less thirsty crops — such as apples.

“When we run out of water, they can’t grow berries,” he said. “At some point the berries are going to have to downsize.”

To swing the balance of the Pajaro Valley’s cropland back toward apples, Martinelli’s company is embarking on a program to revitalize the valley’s aging orchards by replanting apple trees on small parcels of



SHMUEL THALER — SANTA CRUZ SENTINEL

A pretty, but unsellable second apple crop grows in Mel LaRussa’s Trabing Road orchard.

land, leased from homeowners, sprinkled throughout the region.

The replanting program also provides the company with convenient “test kitchens” for trying out new techniques and apple varieties.

“As we plant these orchards, we’re going to be looking for varieties and farming methods that are more adaptable to what could be a warming environment,” Martinelli said.

Other growers are also experimenting with ways to help their trees chill out. “We have tried spraying a white, clay-like compound on the trees to reflect sunlight,” Rider said.

Because dark colors absorb heat more readily than light ones, the temperature of dark apple tree bark tends to rise higher than the air temperature on sunny winter afternoons. Giving the trees a white coat should help keep them cool, Rider said. He also plans to experiment with hanging shade cloth above his trees to keep the sun from reaching them in the first place.

For Menge, the key to growing apples in the Pajaro Valley is finding varieties that are suited to the region’s unique conditions, including the possibility of more warm winters in the future. He said he’s constantly looking for a more delicious and productive type of apple.

“I’ve always got 5 to 10 percent of my orchard being switched over to something,” he said. “A lot of the apples I’m getting rid of are decent apples that do pretty well, but I’ve found something that’s better.” Menge said he hunts for forgotten apple varieties in abandoned orchards, in addition to raising new apples from seedlings.

Menge and Martinelli both noted that some popular apples, such as the Honeycrisp, are better left to growers in Washington state. The way to avoid competing with Washington, according to Menge, is to focus on apples that do well here but not there, like some red-fleshed varieties.

The business of growing apples in the Pajaro Valley may be changing, but at least one thing is still the same. Watsonville’s apples are very flavorful, Martinelli said. And LaRussa couldn’t agree more.

“We believe in the apples,” LaRussa said. “They’re delicious when you pick ‘em off the tree.”



SHMUEL THALER — SANTA CRUZ SENTINEL

Watsonville apple grower Mel LaRussa shows off the paltry size of the apples in his second crop of the year.



KEVIN JOHNSON — SANTA CRUZ SENTINEL

A colorful apple crate mural looks over Maple Avenue in Watsonville on Friday afternoon as a man shuffles across the sidewalk.



KEVIN JOHNSON — SANTA CRUZ SENTINEL

Gray rain clouds part over one of the colorful apple crate murals on East Beach Street in Watsonville on Friday afternoon.

# Weather

FROM PAGE 1

mph are forecast for Central California.

Higher peaks in the Sierra Nevada could see another foot of snow, more than enough to keep sledgers, skiers and snowboarders happy.

Several inches of snow fell on Southern California mountains, bringing joy to ski resorts and cautions for motorists.

Chains were required Saturday on several roads leading to the Bear Mountain and Snow Summit resorts in the San Bernardino Mountains.

A storm Friday dropped six inches at higher elevations and brought rain, hail and thunderstorms elsewhere.

Closer to Los Angeles, the Mountain High ski resort in Wrightwood got more than two inches of snow just in time for the weekend.

The National Weather



JUAN CARLO — THE VENTURA COUNTY STAR

Spectators gather near the Ventura Pier on Friday in Ventura, where high tides and large waves flooded the area.

Service said daytime temperatures in the mountains will stay in the 30s through the weekend and that more snow is expected before Monday.

The Southern California coast remains under a high surf advisory through Sunday, with unpredictable

waves topping 10 feet.

Forecasters have said a strong El Nino weather system could drench California and other parts of the West in the coming months.

However, Johnny Burg, a meteorologist with the National Weather Service in Seattle, said he didn’t be-

lieve the latest Northwest storms were related to El Nino, a warming in the Pacific Ocean that can alter weather worldwide.

“We just had a jet stream pointed at us, and it brought successive storms,” he said. “We don’t see the effects until the winter.”

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