

Warmer temperatures may mean headier wine

CALIFORNIA GRAPE GROWERS ADAPTING TO CLIMATE CHANGES

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The heat is on, and it's beginning to affect California grapes.

Researchers say average temperatures on the Central Coast are increasing. And that could mean sweeter grapes and, consequently, higher alcohol content.

But not everyone is convinced climate is the cause. Some wine growers say they postpone harvests to get the

kind of flavor today's consumers desire.

Nonetheless, the facts show:

► Temperatures during the region's wine-growing season are 1.3 degrees higher today than a half-century ago.

► The Central Coast saw 19 fewer days below freezing in 2002 than in 1948. The frost-free period was 48 days longer, with the last spring frost 35

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days earlier and the last fall frost 13 days later.

The data come from a study presented at December's meeting of the American Geophysical Union in San Francisco. The study looked at data from National Weather Service stations in California, Oregon and Washington between 1948 and 2002 and found an average temperature increase in all areas of 1.6 degrees.

In Napa Valley, such changes have resulted in earlier bud breaks — the time when the vines start flowering, said Gregory Jones, a climatologist at Southern Oregon University who conducted the study. He said the same is likely true for other areas, including the Central Coast.

"It's still making wine, but it's different, and anybody who says it's exactly the same and there is no issue — they are just not willing to admit it," Jones said.

Some local wine growers say it's true that sometimes there are earlier bud breaks in Monterey County.

"We have seen it anywhere from one to two-and-a-half weeks earlier than what we saw 15 to 20 years ago," said Steve Pessagno, owner of Pessagno Winery in Salinas.

But Brecon Jackson, vineyard operations manager of Stags' Leap Winery in Napa, said the reason for earlier bud breaks is natural temperature variations rather than a continuous warming trend.

Jones sees the biggest increases in minimum temperatures, which were 3.2 degrees higher in 2002 for the Central Coast than in 1948. He said this results in higher temperatures at night, which affects wine quality. For example, he said, grapes

lose more acid over night through respiration when it's warmer.

"If you ask anybody, the best wines come from places where during the ripening period you get this fairly warm daytime temperature, but it gets cool at night," he said.

Changing tastes in wine

Higher temperatures may also be responsible for part of the current trend toward wines with high alcohol content, Jones said. When it's warm, grapes accumulate more sugar, and more sugar content in the grapes results in more alcohol content of the wine.

For example, wines in Napa Valley in 1971 contained 12.5 percent alcohol, but in 2001 the alcohol content was 14.8 percent

as a result of higher sugar levels in the grapes, based on data from the U.S. Department of Agriculture.

Part of this variation in alcohol levels can statistically be explained by variations in temperature, Jones said. He said the same could be true for other areas, including Monterey.

"The consumer who is looking to get drunk, gets drunk in a warmer world," Jones said.

Another reason for rising sugar levels, Jones said, is that wine growers leave grapes on the vine longer. That's a response to consumers and to wine critics who tend to reward high-alcohol, high-flavor wines with higher ratings, he added.

Steve McIntyre, a wine grower with Monterey Pacific, agrees.

"Everybody lets them hang

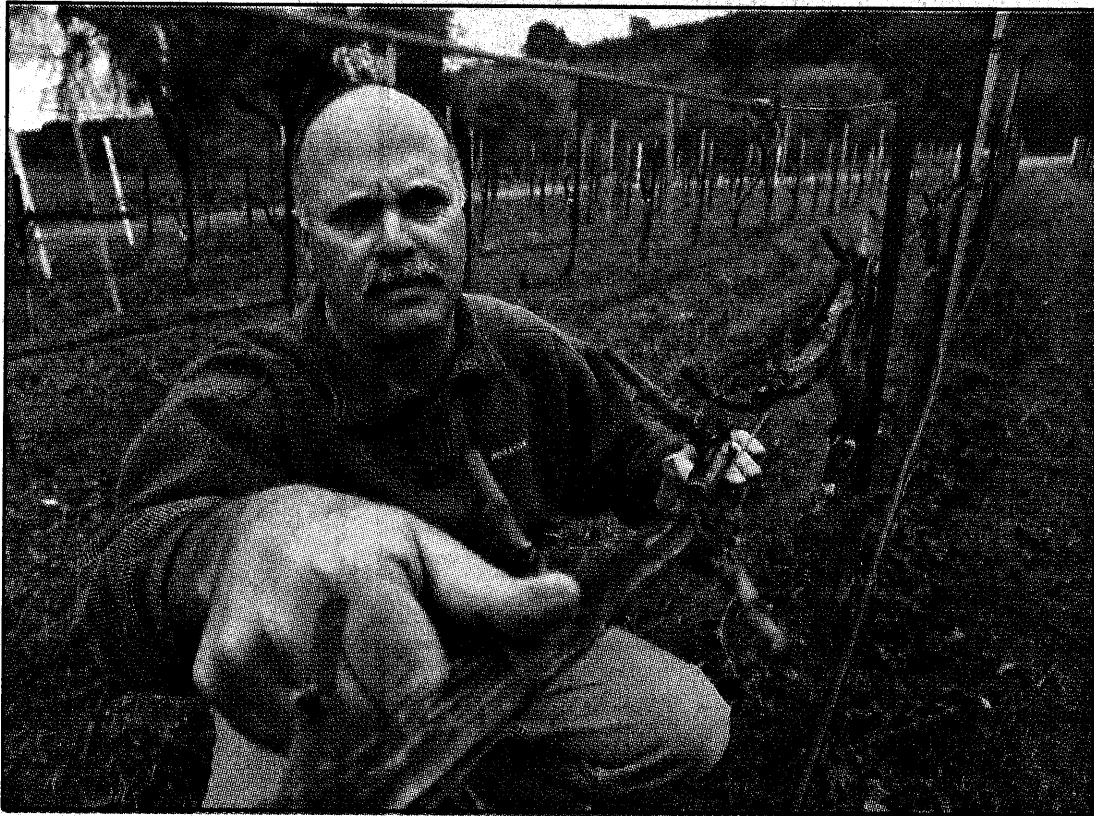
out there (on the vine) longer these days," McIntyre said. "Consumers seem to favor more intense lines of flavor, (and) you've got wine writers and critics who tend to give higher scores for these more intense wines."

But McIntyre disagrees with researchers about temperature as the reason for the high sugar/high alcohol content.

"You can't necessarily say that alcohols are higher just because the ambient air temperature increases," McIntyre said.

Whatever the case, more time on the vine and higher temperatures result in riper fruit, Jones said, and that results in wines with more alcohol, prompting some winemakers to remove alcohol to make the wines balanced again.

"The most common way in



Steve Pessagno, owner of Pessagno Winery in Salinas, checks his vines in his vineyard off River Road.

ORVILLE MYERS/The Herald

which you deal with high alcohol — if you can afford it — is reverse osmosis (to) remove some of the alcohol,” Jones said, adding that he doesn’t think it’s the right thing to do. “If you are removing alcohol, you are also messing with the wine — you are changing some kind of internal characteristics.”

There are other reasons for changes in wines.

Jones cites improved growing methods.

Joel Burnstein, winemaker and owner of Marilyn Remark Wines in Salinas, said more efficient yeast cultures are part of the reason for higher sugar levels. Yeast converts sugar to alcohol during the fermentation process.

Another reason: Fewer grapes per plant today vs. 20 years ago, Pessagno said. But he doesn’t believe higher temperatures are responsible for the high sugar levels.

Nonetheless, Jones said, if current trends continue, average growing-season temperatures in the Western U.S. grape-growing regions will be 2 degrees to 3.5 degrees higher by 2050.

The Central Coast will see temperatures increase 3.1 degrees from the current 64.6 degree average. As a result, average ripening periods could occur one to two months earlier.

Some areas, Jones said, may have to switch to different grape varieties because of the warmer temperatures. Different grape varieties need different average growing season temperatures to give a balanced wine. For example, pinot noir prefers an average temperature around 59 degrees, while cabernet Sauvignon prefers somewhere around 64 degrees.

Jones said warmer areas like the Coachella Valley or the Central Valley may already have to give up growing the varieties they are growing today.

“If you are a grower of pinot noir in the Central Valley right

now, you should be saying, ‘Oh my god, I am crazy,’ and you should be buying land in the coastal zone,” he said.

McIntyre disagrees.

“I don’t know a winery that says it’s too hot to grow the varieties that we have been growing for the last 10 to 20 years,” he said.

McIntyre said it would take a much higher temperature — perhaps a 5- or 6-degree increase — to reach a point where pinot noir can’t be grown in the Central Valley anymore.

In fact, McIntyre said, a warmer climate may actually be good for wine in the cooler areas closer to the coast.

“We can grow two more tons an acre (and) will be able to ripen a little faster,” he said.

A delicate balance

Not everyone likes the heavy, high-alcohol wines sold today, Jones said. While those wines may get higher ratings from wine critics, Jones said, they contain too much alcohol to be consumed with food.

“High alcohol (content) is pretty overwhelming,” he said. “The problem is, it doesn’t (have) a balance that goes really well with food, and that’s what we historically drank wine for.”

So what’s the future of wine in California? Jones doesn’t think it will be great. He said the main problem will be to find enough water to grow wine in a warmer world.

“There won’t be enough water to irrigate the wines, and in California that will be the death knell of most grape growing except for places that have adequate moisture in the soil,” he said.

“There is going to be a war over water in the Southwest at some point. It will be more important than almost anything in the future.”