



## Science briefs

### ■ Sediments reveal health of Lake Tahoe

The last 30 years of urbanization around Lake Tahoe has caused as high a sedimentation rate as the clear-cut logging of the late 1800s, which removed timber from more than 60 % of the basin, according to a report by graduate student Alan Heyvaert and his colleagues in the UC Davis Lake Tahoe Research Group.

Over the last three decades, population of the lake basin has increased tenfold, while the water clarity has been declining about 1.5 feet per year.

The study also revealed a period of recovery by the lake and basin in the early 1900s, as well as evidence that the famous Sierra Nevada lake was able to respond to the forest restoration in the basin after logging was complete. These early results of sediment core studies from the bottom of the lake suggest that plans to control erosion are on the right track, says co-author John Reuter, a UC Davis researcher and director of the Lake Tahoe Interagency Monitoring Program. The sediment cores, analogous to tree rings, also provide a way of measuring the effectiveness of such efforts.

### ■ Urban yard waste benefits orchard

Composted waste from urban yards may have reduced brown rot disease in a San

Joaquin Valley peach research plot. The plot treated with composted lawn clippings, tree prunings and leaves, showed no incidence of brown rot disease 2 harvests in a row in 1994.

Brown rot affected 20 to 24% of fruit in adjacent research plots treated with traditional composts and fertilizers at typical levels. Also in 1994, unamended (control) peach trees had three times more disease than the trees amended with composted urban waste, according to plant pathologist Themis Michailides.

In a postharvest evaluation of the 1994 first harvest, peaches from compost-amended trees had 0% brown rot and the unamended control had 2.5%. However, 24% of the fruit in the neighboring conventional plot had brown rot. In the second harvest, the compost-amended fruit had 0% brown rot, the unamended had 5%, and the fruit from the conventional plot had

20% brown rot. Michailides, who is based at Kearney Ag Center in Parlier, doesn't know why "green waste" appears to reduce brown rot, but he has a theory.

"We found millions of yeast spores on the fruit surfaces in plots treated with urban compost," Michailides says. "The more yeast we had on the fruit, the less brown rot developed."

The green waste compost may carry the harmless yeast into the orchard or may alter the fruit surface to encourage the yeast to grow, he says. Its presence also may block development of brown rot.

### ■ Organic codling moth control approved

The only thing worse than biting into an apple and finding a worm is finding half a worm, or so the old joke goes. Now growers have another weapon to keep worms out of their apples. After 14 years of testing, entomologist Louis A. Falcon, UC Berkeley professor emeritus, has received federal registration of codling moth granulosis virus for use on apple, pear, walnut and plum trees. It has conditional registration in California and full registration will be sought.

The codling moth granulosis virus is a naturally occurring baculovirus that makes the larva lethargic and eventually dissolves them from the inside out.

Field tests have shown that with proper application, the baculovirus could control the worms as effectively as chemical pesticides, including the commonly used pesticide azinphosmethyl. And because the baculovirus attacks only a narrow range of species, leaving other insects and spiders alone, applications did not encourage the proliferation of secondary pests such as mites, scale insects and aphids.

Falcon doesn't claim the baculovirus will supplant chemical pesticides, since it is more labor intensive to apply and monitor and more expensive. Rather, he hopes the baculovirus will help cut use of chemical pesticides. Falcon says integrating use of the baculovirus with judicious application of chemical pesticides could keep the moth at very low levels in the orchard.

Currently it is unclear who will produce the baculovirus, which is registered to the University of California and an organic grower group, Association for Sensible Pest Control, Inc. For more information, contact Howard Kaplan at (510) 672-8843 or farmvest@aol.com.



**Peaches grown with composted yard clippings had no brown rot disease.**

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