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# In This Issue

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## Biological Control of Woolly Whitefly

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Because the woolly whitefly poses a serious threat to the citrus industry—spreading rapidly and causing extensive citrus damage—and because chemical eradication has proved largely unsuccessful, various parasites have been imported as biological controls of the pest. Parasites from Mexico and South America must be tested for their suitability to the various environments of California citrus-growing areas.

## Applying Phosphorus Through Drip Irrigation Systems

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The disadvantages of clogging drip lines and assumed lack of movement have prevented the application of orthophosphate through drip irrigation systems. Orthophosphoric acid can be applied without these disadvantages when extreme care is used. Organic phosphates such as glycerophosphate will move farther in soils, are easily applied through the drip system without clogging, and P is readily used by plants.

## Walnut Blight Control

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Experiments indicate that the number and timing of treatments for optimum control of walnut blight vary with the season, rainfall being the governing factor. There was no evidence that any one control chemical was superior to another.

## Reducing Set in Ruby Seedless Grapes with Gibberellin

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To reduce bunch rot and to facilitate packing of the normally compact clusters of the Ruby Seedless grape, it has been determined that low rates of gibberellin treatment applied at late bloom produce loose clusters without increasing shot berries.

## Increasing Growth and Yield of 'Thompson Seedless' Vines by Trellising

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A five-year study of trellising 'Thompson Seedless' vines in the San Joaquin Valley shows that a wide, four-wire double crossarm trellis increases vine growth by 38 percent, crop yields by 20 percent compared with a one-wire trellis.

## Pear and Apple Scab Control

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New research on pear and apple scab in the north coast counties of California indicates that Benlate and Cyprex are highly effective as back action materials and resulted in a supplemental label for Benlate on pears. With more accurate prediction of scab infection, more effective use of these materials can be made.

## Influence of Variety and Cutting Stage on Oat Hay Yields

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Over a ten-year testing period, four varieties of oats were found most suitable for producing high quality hay. California Red had the highest average yield, but each variety had important qualities.

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# Research Briefs

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## FILLING A BLANK

About 25 percent of California's annual crop of pistachio nuts from 23,000 acres turns up blank (empty)—a problem which has plagued growers worldwide for a hundred years and for which no satisfactory solution has ever been offered. Researchers in the U.C. Department of Pomology now say the major cause of blanks in pistachios is embryo abortion influenced by seedling rootstock. The balance is the result of fruit produced without pollination and fertilization.

## UNDERSTANDING MALARIA

The nature of the malaria parasite is being studied by U.C. biologists at Riverside to determine what it receives from the red blood cell and how it destroys the cell that provides its sustenance. Understanding how the malaria parasite obtains nutritional materials could be of importance in the development of future antimalarial drugs.

## ONCE IS ENOUGH

Recycling manure through livestock to capture some of the feed value not utilized the first time it was ingested doesn't have much potential, according to U.C. animal scientists at Davis. Though feedlot manure may have 12 to 18 percent crude protein and other nutrients, digestibility is very low. And livestock don't like it.

## MULTI-PURPOSE GREENBELTS

Research, at a 24-acre brushland site near Lake Arrowhead, by U.C. plant scientists has yielded the first feasible preliminary design of a multi-purpose greenbelt that will reduce the fire hazard in chaparral areas, safely dispose of community sewage effluent by using it for irrigation, and conserve water in the mountain region.

## TOUGHER TURF

New strains of tall fescuegrass selected at the U.C. South Coast Field Station show good potential for use where extensive low-maintenance turfgrass plantings are desired. Results have demonstrated that a common southern California practice of overseeding bermudagrass with a cool-season grass during the fall to maintain a lawn's green in winter can be improved by substituting perennial for annual ryegrass.