



Basal sprouts and trunk of Calimyrna fig (left photo) sprayed to a height of two feet with 1% naphthalene acetic acid ethyl ester on June 22, 1973 (photo taken 3 months after treatment). Right photo, untreated basal sprouts and trunk showing growth of sprouts.

## BASAL SPROUTING OF FIG TREES CONTROLLED WITH NAA

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**S**HOOTS SPROUTING from the basal area of the trunk are a problem in commercial fig orchards and considerable time and money is spent in removing these sprouts by hand pruning. A growth regulator spray which would prevent or retard this unwanted growth would be of economic value to fig growers.

Good results were reported three years ago in controlling trunk sprouts of nine species of landscape trees and shrubs with several growth regulators including naphthalene acetic acid (NAA).

### NAA formulations

These tests were initiated to evaluate two formulations of NAA, sodium salt (72-A96) and ethyl ester (72-A-112) at concentrations of 0.5 and 1.0 per cent in a water spray to control sprouts on Calimyrna figs.

In addition to the aqueous spray, a 50% water soluble latex paint was used as a carrier for NAA in both the sodium

salt and ester formulation and was applied with a brush to the tree trunk. A 10% latex based paint containing NAA was sprayed on the trunk.

Ethyl hydrogen 1-propylphosphonate (NIA-10637) applications were also made at a 5% concentration plus 1% ethyl ester of NAA (NAAEE), in an asphaltic base applied as an aerosol spray. Results of the tests with NAA and NIA-10637 plus NAAEE are reported here.

### San Joaquin

The fig trees treated were located in the Central San Joaquin Valley and had been planted in 1968. Trees were on a 12-ft spacing in rows which were 24 ft apart. The 14 treatments were NAA (72-A96) at 0.5% and 1% concentrations in water by spray, 10% water soluble latex paint by spray and 50% water soluble latex paint by brush. Applications of NAA (72-A-112) were made at 0.5% and 1% concentrations in water by spray, 10% water soluble latex paint was sprayed on, and 50% water soluble latex paint was applied by brush. NIA-10637 at 5% plus NAAEE 1% in an asphaltic base was applied as an aerosol spray.

Sprouts were removed to a height of 2 ft before treatments were applied by brush. All other tree trunks and sprouts were sprayed to a height of 2 ft. Basal sprouts that were not removed ranged from 6 to 24 inches in height. Trunks and sprouts were thoroughly sprayed to runoff. Water sprays were applied with a three-gallon sprayer. The 10% latex base solution was applied with a small hand pump atomizer.

A randomized block design of four replications with a single treatment tree in each replication was used. Application of the growth regulator was made on June 22, 1973 and counts on regrowth were made on September 5, 1973.

Results are shown in the accompanying table. Best results were obtained with 1 percent NAA applied as a spray in water. All sprouts were defoliated with 5 to 10 inches of dieback. Sprouts 10 inches in length or shorter died to ground level (see photo).

Moderate results were obtained with 0.5% concentration of NAA in water and 1% concentration in 10% latex paint. NAA applied by brush in 50% latex paint gave the poorest results in control-

ling sprouts. Five percent NIA-10637 plus 1% NAAEE in an asphaltic paint base was not as good as 1% NAA in water.

While not all of the sprouts treated were completely killed, no new buds sprouted on any of the treated trees before the trees became dormant in the fall of 1973.

There was no visible evidence of effects on the foliage of the trees, except where treated, or that the materials were translocated. There were also no visible symptoms of harm to the fruit set.

Fruit samples were taken for residue analysis. These chemicals are not registered for use as described in this article and cannot be used for this purpose until approved by Federal authorities.

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TABLE 1. BASAL AND TRUNK SPROUT INHIBITION IN FIGS, AFTER TREATMENT WITH GROWTH RETARDANTS

Chemical	Mixture	Method applied	Ave. no. of living sprouts per tree*		5% + 1% Check
			0.5%	1.0%	
72-A96	50% latex + water	brush	3	2	
72-A-112	50% latex + water	brush	3	2	
72-A96	10% latex + water	spray	2	1	
72-A-112	10% latex + water	spray	2	1	
72-A96	water	spray	1	0	
72-A-112	water	spray	1	0	
NIA-10637, NAAEE	asphaltic base	spray			1
Checks	—	—			21

\* 4 trees per treatment.

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