

Chemical Control of Suckers in Grape Vineyards Examined

Morris, J.R. and D.L. Cawthon *Fruit South* 6(1):27 1981

SUCKERS, those unwanted shoots that grow from the trunks of grapevines, can be controlled by the application of a chemical, but what effect does this chemical have on the yield, vine growth or juice quality of the grapes?

RESEARCHERS at the University of Arkansas Agricultural Experiment Station examined the effects on Concord grapevines of trunk applications of naphthalene acetic acid (NAA) at concentrations of zero, two, four, and eight percent.

U of A horticultural food scientist Dr. Justin R. Morris and research assistant Donald L. Cawthon found that the eight percent concentration completely controlled sucker production for one season without the need for manual removal and without adverse effects on vine yields, vine size or fruit quality.

When not controlled, suckers can require a considerable amount of hand labor for removal. These shoots rob the main trunk of nutrients which would be better channeled to the production of grapes. They also make general vineyard maintenance difficult.

The researchers applied NAA to the trunks of ten-year-old grapevines in April, 1976, when shoot growth on the trunks ranged from dormant buds to shoots one centimeter in length. Sucker control on the trunks was monitored for three seasons following NAA application.

With a single application of NAA at eight percent suckering was significantly reduced for three seasons, but 100 percent control was only reached the first season, the researchers said.

NAA has been used successfully to control shoot production near pruning cuts, as well as control unwanted sprout growth on several species of tropical and deciduous fruits. According to Morris and Cawthon, this is the first time this research has been done on Concord grapes.

Trunk application of NAA did not affect shoots growing below the ground surface, the researchers said, which is advantageous since suckers are needed for trunk renewal in mature vineyards.

We need to do additional research to determine the effects of repeated annual applications of these rates of NAA, the researchers said. Complete control every season would eliminate the need for hard labor to remove the suckers.