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A COMPARISON OF GA_3 AND GA_{4-7} ON CARIGNANE AND CHENIN BLANC VARIETIES FOR BUNCH ROT CONTROL

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Summary

The gibberellins, GA_3 or GA_{4-7}, were approximately equal in reducing bunch rot in Carignane and Chenin blanc when applied prebloom. The two varied according to variety in reduction of fruitfullness the year following application. Promalin®, a mixture of GA_{4-7} and 6BA, did not reduce fruitfullness in Chenin blanc while GA_{4-7} alone was damaging.

Gibberellin, GA_3, reduces bunch rot in such wine varieties as Carignane and Chenin blanc but its use may reduce fruitfulness the following year. Another gibberellin, GA_{4-7}, used either alone or as Promalin®, a combination of GA_{4-7} and 6 benzl adenine, in equal concentrations, might be effective in reducing bunch rot without adverse effects.

Procedure

Ten single vine replications were treated in two varieties. Observations were made of cluster loosening and rot during the season. Flower cluster counts were made in the spring of 1983.

Results

With Carignane, GA_3 and GA_{4-7} looked about the same in cluster loosening and rot reduction with GA_3 perhaps slightly superior. With Chenin blanc, GA_{4-7} may have been slightly superior to GA_3 with Promalin® slightly less effective.

In regard to cluster counts the spring following application, GA_3 reduced fruitfullness in Carignane while GA_{4-7} did not. With Chenin blanc both GA_3 and GA_{4-7} reduced fruitfullness, GA_{4-7} more than GA_3 although not significantly so. Promalin did not reduce flower cluster counts so it appeared that the 6BA offset the effects of GA_{4-7} in reducing fruitfullness.

Table 1. The effects of GA_3 and GA_{4-7} on flower cluster numbers when applied prebloom for bunch rot control.

	Application May 3, 1982			Apr. 20-21,1983
Varity	Material	PPM	Avg. shoot length, inches	Flower clusters per vine
Carignane	None	-	-	66.6a
Carignane	GA_3	7½	13	45.0 b
Carignane	GA_{4-7}	7½	13	65.1a
Chenin blanc	None	-	-	83.8a
Chenin blanc	GA_3	15	10	63.3 bc
Chenin blanc	GA_{4-7}	15	10	45.5 c
Chenin blanc	Promalin	15	10	78.3ab