



Vine bleeding delays growth of T-budded grapevines

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Past experience has shown that scions grafted at a high level do not show callusing or bud growth until grapevine bleeding has stopped at the cut surface of the vine trunk. This observation indicates that T-budded vines slashed to promote bleeding below the area of the inserted buds grow earlier and produce more total growth by the end of the season than vines that are not slashed.

A preliminary experiment was started June 21, 1977, to study the effects of bleeding on bud take and shoot growth. Sixteen six-year-old table grape seedling selections at the Kearney Horticultural Field Station, Parlier, were T-budded to Cabernet Sauvignon. Most vines were double budded; a few vines having diameters over 2 inches were triple budded. The tops of the vines were cut off 38 to 40 inches above the ground just before budding and buds were inserted 1.5 to 2.0 inches below cuts. Dormant budwood, collected in January and held in refrigeration at 32 to 34° F in a large plastic bag containing moist wood shavings, was used.

Within two hours after budding, most of the vines were bleeding profusely at the cut surface. Ten of the vines were slashed 6 inches above the ground with a medium-toothed folding saw; two angular cuts were 1/8 to 3/16 inch deep on opposite sides of the trunk. Within two hours after slashing, bleeding at the cut surface of the trunk had ceased and the bleeding was occurring from the slashes at the base of the trunk. A few of the vines having larger-diameter trunks still

bled at the top. These vines were re-slashed in the same area of the original cut to encourage bleeding at the trunk base and arrest bleeding at the top. The remaining six vines were not slashed, but were allowed to bleed at the top (control).

The bud grafts on the vines that had been slashed at the base started to swell and push in 5 to 7 days. The buds on the control vines did not start to swell and push until bleeding had ceased, between 2 and 2 1/2 weeks.

On August 3 the vines were examined and the length of the shoots was estimated. On January 11, 1978, the vines were pruned. The brush was weighed and the total brush length was

measured on a vine basis. The cases were made into 12- to 14-inch cuttings and graded into three sizes. The table shows the results.

Slashing did improve the take although not significantly. More noteworthy was the early growth of the buds on the vines that had been slashed and the resulting greater growth of shoots and canes by the end of the growing season. The new head was well established and partial fruit production is expected in 1978. The heads on the control vines are smaller and the production is expected to be much lower.

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Effect of Vine Bleeding on Take and Shoot Growth of T-Budded Grapevines—
Kearney Horticultural Field Station, Parlier, California 1977

	Treatment*	
	Trunks Slashed	Trunks Not Slashed (Control)
No. vines budded	10	6
No. buds inserted	22	13
No. buds growing	21	11
Percent take	95.5	84.6
Shoot growth, 8-3-77		
Range in length (inches)	3-48	1-24
Mean length (inches)	27	8
Dormant cane growth, 1-11-78		
Mean weight canes, oz.	26.4	13.1
Mean total length (ft.)	47.6	30.5
Mean number of cuttings		
Grade 1 0.5-0.75 in. diameter	10.1	5.2
Grade 2 0.25-0.5 in. diameter	10.3	5.3
Grade 3 less than 0.5 in. diameter	11.1	4.2
Total	31.4	14.7

*Vines budded June 21, 1977

Understock—Six-year-old table grape seedling selections

Budwood—Cabernet Sauvignon

Trunks slashed 6-12 inches above ground on two sides using a medium-toothed folding hand saw.