

Bunch Grapes Information

The Importance of Weed Control in Newly Planted Vineyards

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The first few years after planting is critical to the long term productivity and profitability of any perennial fruit crop. Early growth is essential for maximum early productivity. A number of factors are involved with early plant growth. Water and fertilizer are important to young vines and in order to maximize the availability of both resources, weed competition must be eliminated.

In an effort to better understand the impact and significance of weed competition in newly planted vineyards research was conducted to determine the critical weed-free interval. Treatments consisted of varying intervals of weed control which were 0, 4, 8, 12, 16, 20, and 24 weeks weed-free after planting ([WAP](#)). The 0 and 24 WAP treatments were equivalent to a weedy and weed-free checks, respectively. The treatment intervals of 0, 4, 8, 12, 16, 20, and 24 correlated to calendar dates of the first week of April, May, June, July, August, September, and October, respectively.

The results from this trial indicate that weed management in the year of establishment is critical for maximum growth. Visual estimates ([Fig. 1](#)) in the fall of vine vigor indicated that maximum growth occurred when vines were maintained weed-free for 12 weeks (through July) or longer. However, controlling weeds for 4 and 8 weeks was considerably better than doing nothing, but resulted in less vine growth than maintaining weed control 12 weeks.

Vine cross-sectional area (VCSA, [Fig. 2](#)) was calculated by measuring vine girth. This measurement is commonly used to quantify vine growth. The relationship between VCSA weed-free weeks was quadratic. Once again 12 weeks was the minimum time vines had to be maintained weed-free to maximize vine growth. However weed control for 4 and 8 WAP was considerably better than doing nothing as was noted visually.

In general weeds must be controlled in newly planted grape vines or vine growth will be sacrificed. Based on results from this study, weeds must be controlled through July for maximum vine growth to occur.

In newly planted vineyards there are several herbicide options. Surflan and Prowl are available for use once soil has settled after transplanting, however Prowl is registered for use as a dormant application only. Shielding (use of grow tubes) newly planted vines from herbicides allows the use of non-selective postemergence herbicides like paraquat or Rely. In situations where bermudagrass or Johnsongrass are problems Select, Fusilade, or Poast may be used in vineyards. In addition to perennial grass weeds, these herbicides also control annual grasses like crabgrass.

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