

# WINES&VINES

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## Tips on Buying a Mechanical Harvester

There are basically two kinds of mechanical harvesters: the self-propelled unit with a built-in tractor and the tow-behind harvester that is hooked to a tractor supplied by the user. The tow-behind models cost between \$40,000 and \$75,000 and are generally used in vineyards of 100 acres or less. The self-propelled units cost between \$120,000 and \$150,000 and can easily pick 250 acres and more over the course of a season. The purchase of a tow-behind unit is often justified at the point where the cost of hand harvesting reaches \$8,000 to \$10,000 a year. Some wineries find that their economics justify considering a mechanical harvester for as little as 14-20 acres.

The tow-behind models are, for all practical purposes, used exclusively for harvesting grapes. On some self-propelled models the harvester head can be removed and the unit becomes an over-the-row tractor that can be used for spraying, pruning and other vineyard tasks. The degree of vineyard mechanization being planned can be a major factor in selecting a mechanical harvester.

The two most important kinds of picking heads for use in the East are the striker head and the bow head. A third kind, the trunk shaker, is widely used in California for vineyards with sturdy trunks and high yields but is of limited value in the East where vinifera trunks are renewed.

A basic consideration in selecting a picking head is the kind of trellising system the harvester will be used on, a wide trellis or a straight vertical trellis. If a harvester must be able to handle both, a combination head is available that can be used on both single and double curtain.

The two main kinds of collecting systems are the belt system and the bucket system. The bucket system is better able to carry juice to the collecting bins. It should be noted that the bucket system is primarily for use with a vertical trellis. A belt system can handle up to a four-foot wide crossarm.

Other considerations should also be kept in mind. The efficiency of debris removal varies from unit to unit. The harvester should be compatible with the width of the row, and the turning space should be adequate. The minimum and maximum height of the beaters should be determined so that they pick in your fruit zone. The ability to operate on a slope may be important, and many units permit use on a 25% to 30% slope. In climates where it can rain at harvest and create muddy conditions, it is important to consider 4-wheel drive on self-propelled models and powered wheels on tow-behind models. Finally, servicing is a major consideration and during harvest season it is essential that spare parts can be obtained overnight.