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8. Mechanical harvesting

A mechanical grape harvester is a self-propelled machine that circulates over the top of the rows of vines and has a system of beaters that shake the vines and vine support structures (poles and wires). This intense shaking (vibration) or beating causes the grapes to separate from their stems and fall into a transporter that accumulates them in a 400-500 gallon hopper. The harvested matter passes through a strong current of air that eliminates the leaves and shoots and allows the grapes to drop into the hopper.

In the beginning, some 15 years ago, these mechanical harvesters worked imperfectly and the grapes were so mistreated that it was believed that they were not fir for making quality wine. Today, 70% of Bordeaux harvests by machine; the same is true of California and Australia. Mechanical harvesting requires the vineyard to have a sturdy structure, upright vines, longer rows, and a relatively flat space at the end of each row. The presence of irrigation or drainage ditches is a big problem for harvester mobility.

In practice, a slow-working harvesting machine can pick 0,5 hectare per hour, or 4 hectares in 8 hours. The machines usually operate 20 hours, or 10 hectares per day. Considering an 8-hour work day harvesting 4 hectares at 12 tons/ha., the result is a harvest of 48,000 kg. per day. This same quantity would require 60 human pickers plus complementary personnel, or a staff of 65 people. At today's prices, the cost a a manual harvest is the same as machine harvest.

Working with a mechanical harvester implies having special hoppers to transport the destemmed grapes to the winery. Some bunches break open, and this system usually releases more juice than a manual harvest using plastic boxes or bins, but it is no more

destructive than transporting grapes in bulk. Working with containers of at least 3,300 pounds, the winery needs to have a mechanized unloading system or use transporters with automatic dumping.

Finally, we insist again that machine harvesting requires a more solid and very well-aligned vineyard. Most industrialized companies design their new vineyards for mechanical harvesting in the future. Mechanical harvesters can be rented for approximately 280 USD per hectare. The harvest is a complicated and expensive process that must be planned for and carried out with much rigor in order to obtain a quality wine. Furthermore, this is the final stage of a long process of work in the vineyard and the cellar. Great hopes are based upon the harvest and so it therefore seems natural to celebrate it with the traditional "Harvest Festival".