

Top Grafting Fact Sheet

What are the pros and cons?

The current economic climate has many in the wine industry considering changes to their clonal or varietal mix - and in recent weeks, we've received a number of calls from growers looking to top-graft their vineyards. Riversun can supply an extensive range of clean, virus-tested budwood for top-grafting. (Please note that our Premium Imports, including ENTAV-INRA® selections, are only available as grafted grapevines.)

Our website lists all the varieties and clones available, but you will need to order material in advance.

Typically, top-grafting (also called top-working) is chosen when a grower wants to change varieties quickly to take advantage of new trends or to meet contract demands from a winery.

While some New Zealand growers have taken this route and achieved remarkable success – others have suffered substantial failures. If you're considering top-working your vineyard, take the time to weigh all the pros and cons.

The pros

- Initial costs are often cheaper than replacing vines.
- The time to full production can be as little as one year.
- Vine age is retained (certainly, the root structure remains).

The cons

- The "take" (success rate) can be as low as 0%: where re-grafts are required, the associated costs will rise. In some vineyards, the final cost of top-working has been significantly higher than the cost of replacing all vines.
- The grower must bear the risk of failure.
- The vineyard will be uneven. Even a 90% take means that 10% of vines will require replanting or subsequent re-grafting again the following year.
- Vine training is often expensive: the shoots from a top-worked vine are extremely susceptible to breaking in the wind and require constant attention during the establishment phase.
- The opportunity to change or improve soil structure, drainage, vine spacing, rootstocks and trellising is foregone.
- Vine failure may not be obvious for two years – by then, the cost of vineyard management far outweighs the higher initial cost of purchasing replacement grafted vines from a nursery.



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The health issues

- Top-grafting vines where virus is already present guarantees that the new vines will be virused.
- Similarly, if new budwood is untested, it could introduce virus to the existing vines.
- Large vine wounds, such as those made when top-grafting, may leave the vine susceptible to attack by trunk fungi, such as Eutypa or Black goo.
- Graft incompatibility issues are more likely to show during the second year. In nursery production, this occurs when vines are planted out – a stage that does not occur with top-grafting, leaving the grower to bear the risk, rather than the nursery.
- When two or more minor viruses are present, a compounding effect can sometimes take place, making vine establishment more difficult (or, sometimes, impossible).

Recommendations

- Test the vines you intend to top-graft for major viruses, especially Grapevine Leafroll-associated Virus 3 (GLRaV3) – testing 3% of the population is a minimum level for testing.
- Purchase only budwood that has been tested for and shown to be free of GLRaV-3.
- Always paint vine wounds with suitable protectant.
- Consider whether your vineyard would benefit from additional alterations, such as spacing, rootstock choice and/or row orientation, which can only be made when replanting.