

There is little doubt that grove management, cultivar, climate and soil etc interact (as they do with winegrapes) to create special yield and quality characteristics for our oils. Again it is most useful here to treat all these as 'givens' and to focus this chapter's discussion just on the factors relating to harvest. We deal with a whole range of 'grove management' factors (mostly affecting yield rather than quality) in the other chapters of this *IOP/BMP* manual. The remaining factors - 'cultivar', 'weather', 'climate', 'soil' - we can do little about without very expensively revisiting earlier decisions made regarding the siting (regional and local) and planting of our groves.

Latitude: It is perhaps just worth remarking that there are indications of a trend in New Zealand for *decreasing* oil yield but for *increasing* oil quality with *increasing* latitude. We have already seen - equation (2) above - that yield and quality can to some extent compensate for one another.

Yield - The relationship for yield is quite *un*-surprising as the growth rate and productivity of all sorts of plants is well known to increase as a climate becomes warmer (see [TEMPERATURE AND PLANTS - GDD](#) and [TEMPERATURE AND OLIVES - GDD](#)).

Quality - The second relationship (increasing oil quality with increasing latitude) is more interesting but less robust as it is based on a much more limited dataset (see Fig. 1). Also, the observation may in part reflect a tendency to harvest the fruit somewhat early further south because of heightened frost risk - but this is not a whole explanation. In support of this southward oil quality trend we note that a similar observation has been made in respect of the oils produced on the 'mainland' of Australia when compared with those coming from the more southerly and cooler, Tasmania. Tasmania is centred on latitude 42° - roughly the same as our Nelson/Marlborough regions.

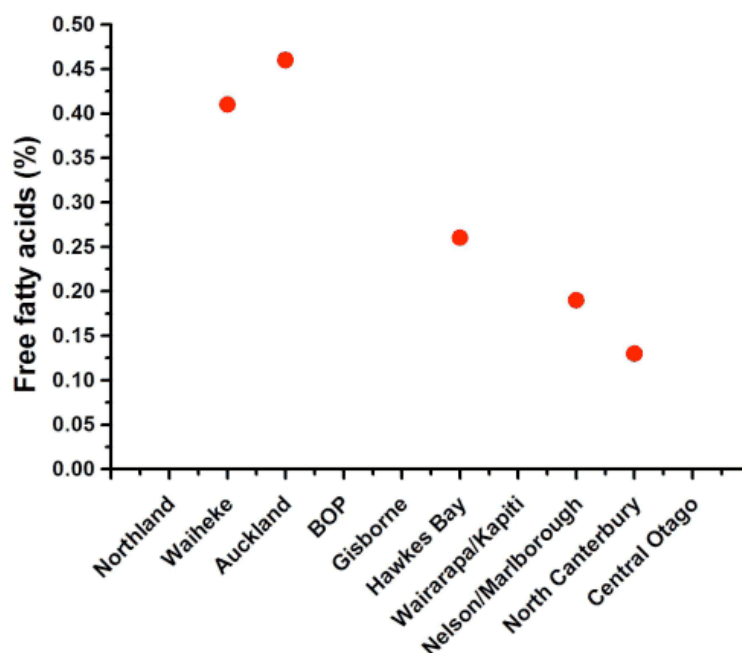


Figure 1. Such data as we have for New Zealand olive oils suggests that levels of free fatty acid (FFA) decrease with increasing latitude. A low FFA is seen as a key attribute of a quality olive oil.

