

Olive Growing Limits

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Temperature is not exacting, it depends on:

- How long the temperature remains at low levels
- How well hardened off the trees are due to drought stress or limited nitrogen or gradual temperature decline compared to rapid decline or tender over watered - fertilized trees
- Snow cover can protect trees
- High wind and low humidity can make the temperature effect worse and vice versa
- Elevation effect at what latitude?
- Variety is important, but tolerances are usually only about 5-6°F one way or the other
- Timing – freezing weather at the wrong time can cause abnormal flower development and poor fruit set

Wet Springs or Summers:

- Can cause poor fruit set
- Problems with foliar diseases
- foliar diseases can be controlled, but this will increase production costs.

It also depends on how risk averse you are and how much you need to make a profit. Loss of crop every “so many” years may make olive growing unprofitable. Biased claims are sometimes made by people wanting to sell trees, irrigation equipment, or install orchards for their profit. Trees grow just fine until a real cold spell comes along. Risk goes up as the likelihood of exposure to the listed conditions increases.


Occasional strong freezes occur at 10-20 year intervals. In between everyone seems to forget how cold it can get every once in a while. The above data was based on worldwide input and data from several University of California studies of damage to trees from various freezes over many years.

The next page has some photos of trees injured by cold and or diseases from rainy weather

Damaging Climatic Conditions for Olives

- Winter – young trees < 25°F
- Winter – mature trees small branches < 22°F
- Winter – mature trees killed ~ <15°F
- Autumn – fruit before harvest < 29°F
- Spring – rain, very high humidity, or hot dry wind at bloom

Lowest spot on valley floor is not the best



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Freeze damage to whole olive tree



Minor freeze damage to leaves



Freeze damage cracking shoots & regrowth below



Frozen shoot tip



Freeze damage to young tree



Freeze damage to fruit



Good and frozen fruit



Shriveled frozen fruit



Peacock Spot causing whole tree defoliation



Cercospora Leaf Spot – turns leaves yellow with dark underside



Peacock spot



Peacock Spot and Cercospora defoliating the branch except for tip