Olive growing in Tasmania

Suitability factors for assisting in site selection

Olives (*Olea europaes*) originate in the hot and dry conditions of the Mediterranean. They are hardy perennial trees, able to withstand a large variation in temperature. Olives will grow almost anywhere, however, yields can be greatly improved by selecting a suitable site. The most critical points about selecting a site are drainage and chilling period.

Climate

Olives favour cool to cold winters and hot dry summers. Olives have a chilling requirement that allows the tree to prepare itself for fruiting. Winter temperatures fluctuating between 1-18°C and an average daily temperature in July of less than 12°C is ideal. Most of Tasmania meets this chill requirement.

Olives have a degree of frost tolerance. Mature trees can withstand temperatures down to -6◦C, but newly planted trees are more sensitive. Olives being grown for table fruit can have their quality affected by -2◦C frosts, but this is less of an issue for oil production.

Areas with high summer rainfall should be avoided due to the increased risk of fungal and bacterial diseases, which can increase the cost of production.

Drainage

Olives require well drained and aerated soils as they do not tolerate waterlogging. They are best adapted to deep, well structured sandy loam to clay loam soils, as these provide good drainage. Heavy clays should be avoided. Digging soil pits on a prospective site can give a good indication of a site's drainage capability.

Soil pH

Olives grow best in soils that are neutral to slightly alkaline. Soil pH within the range of 6.5-8 is preferred, but they can tolerate pH to 5.5.

Irrigation

A mature olive grove uses between 6 and 10 megalitres per hectare per year (600 to 1000 mm) including rainfall. Annual rainfall of between 500 and 800mm is ideal, which often leaves a deficit to be made up by irrigation. An advantage of olives is that they can tolerate poorer quality irrigation water, with EC up to 5.5 dS/m.

Slope

Sloping land has obvious advantages with regard to drainage. Another advantage is that olives can be grown on rocky country where other crops can't be grown. Slopes of greater than 20% are likely to cause problems for mechanical harvesters.

Wind

Young trees are susceptible to damage and pollination can be reduced by strong winds. Sites that are protected from strong winds are thus advantageous, although natural and artificial wind breaks can be erected to provide protection.

Pest damage

Birds are not generally a problem, however wallabies have been known to eat young leaves when there is a feed shortage. Avoid areas with high concentrations of wildlife, such as those neighbouring large areas of native remnant vegetation. Alternatively, fencing can provide protection.

Photo supplied by Graeme Harrington, DPIPWE

Developing rules to guide enterprise suitability mapping

Many plants require particular climatic and land characteristics for best performance. Frost, winter chilling, summer heat, drainage, slope and salinity are some of these characteristics. For each enterprise mapped by the Department of Primary Industries, Parks, Water and Environment (DPIPWE), the Tasmanian Institute of Agriculture (TIA) consulted industry experts and reference material to define land and climate "rules" that distinguish suitable from less suitable areas. These rules define the boundaries between the different classes of the enterprise suitability maps.

Suitability classes used are well suited, suitable, marginally suitable and unsuitable. Any limiting factors are also identified to guide the management practices that could help to overcome the limitations.

Landowners and potential investors are able to access comprehensive soil, climate, crop and enterprise information plus complementary farm business planning tools at:

http://dpipwe.tas.gov.au/agriculture/investing-in-irrigation

Prepared by Dr R W Smith TIA
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