

Strawberry growing in Tasmania

Suitability factors for assisting in site selection



There are many varieties of strawberry (*Fragaria spp.*), each with their own climate requirements. Temperature and daylength are important influences on flowering. Care needs to be taken to select a suitable variety.

Growth stages

The timing of key growth stages is influenced by climate and variety. In Tasmania, depending on variety, strawberries flower from September to March, with harvest from October to April. The timing of the key growth stages can be manipulated by planting at different times of the year.

Growers may manipulate the timing of growth stages by various crop management strategies including planting date, pruning, pre-plant treatments such as chilling and the use of protected cropping in tunnels to extend the growing season.

Climate

The primary climate factors that contribute to a successful strawberry crop are the temperature at key growth stages, and rain during harvest, which can damage and downgrade fruit.

Areas that are warmer in spring will produce fruit earlier. Plastic mulch increases soil temperatures and can accelerate crop development in spring. Milder areas will continue to produce fruit later into autumn.

Frosts can damage strawberry flowers. This is a greater risk for varieties that flower early, in October and November, but frost at any time from September to April is likely to cause damage. Growing the crop under fleece, in cloches or in high tunnels can help protect early flowering varieties from frost.

Winds can depress crop growth, even when no damage can be seen. Hot, windy weather can affect fruit quality at harvest. Windbreaks are often planted to provide shelter against damaging winds. High tunnel production can be used to extend the growing season and protect fruit and workers from rain and wind.

Second year strawberries of current commercial varieties should receive sufficient chill (about 350 hours) in most growing locations around Tasmania. First year plants receive sufficient chill in the nursery.

Landscape

An east to north-easterly aspect helps prolong the period for fruit ripening in late summer and autumn.

Slope is a consideration in site suitability. Flat sites on valley floors can be less well drained and more prone to frost, while steep sites can increase both soil erosion risk and the risk to worker safety.

Soil

The best sites for soil-grown strawberries should be well drained with at least 25 cm of soil above any impeding layer, have a soil pH in water of 6.5-7.0 and be free of salinity. If needed, lime can be added to increase soil pH.

Soil salinity greater than one dS/m as measured by the electrical conductivity of a saturated extract will limit crop yield.





Strawberries will grow on less favourable soils but with reduced productivity and potentially higher management costs. Some growers avoid the limitations of poor soils by growing their plants in growing media or in hydroponics.

Whilst a soil depth of >25cm is most preferable, between 15 and 25cm can still grow productive strawberries. Less than 15cm is not suitable for commercial production in soil.

Any well drained soil is considered suitable for strawberry production. Duplex soils that are underlain with heavy clay are less suitable. Poor drainage is the key limitation in duplex soils.

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 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://dpiuwe.tas.gov.au/agriculture/investing-in-irrigation>

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