

Carrot seed growing in Tasmania

Suitability factors for assisting in site selection



The carrot seed crop is a 13-14 month crop. Seed is generally sown in February and harvested in March 13 months later. Carrot seed crops must be isolated from fresh market or processing carrot crops. As such, few carrot seed crops are grown in Tasmania's north-west, with the majority grown in the Northern Midlands and Coal River Valley. Seed production companies also favour sites within close proximity to processing infrastructure, although it is not a necessity.

Climate

Rainfall is particularly hazardous for carrot seed crops. Rainfall during flowering (December 25 – Jan 31) can reduce pollination. Likewise, rainfall during harvest (March 15 – April 7) can also reduce yields and seed quality.

Temperature is not so critical, although warm days during summer assist in pollination. Plants are also susceptible to frost during flowering.

Drainage

Drainage is very important for carrot seed crops. Most crops are grown on raised beds.

Soil

Carrot seed requires more than 20cm of soil. Light sandy soils are avoided because of difficulties with germination and emergence. Soil pHw of more than 5.8 is preferred, with a pHw less than 5.5 classed as unsuitable. Like poppies, carrot seed crops are not suited to paddocks with more than 20% rocks in the top 15cm of soil.

Irrigation

Irrigation is a must for carrot seed crops at drilling and the crop establishment stage (during February/March) for even germination and establishment. It is also important for the maturing crop from November to March for yield and seed quality. There have been reports that the best crops have been grown under centre pivot irrigators where control over irrigation rates is better.

Slope and Aspect

Carrot seed crops are suited to slopes between 0 and 20%. Slopes greater than 20% are difficult for machinery.

Rotation

A carrot seed crop often follows cereal or poppy crops. Paddock history and herbicide residues can render some sites unsuitable for carrot seed.

Pollination

Field officers have noted significant reductions in seed yields due to lower pollination where crops have been grown in close proximity (within 1 km) to prickly box (*Bursaria spinosa*). In addition, a considerable distance from native vegetation is preferred to lessen the likelihood of browsing by wildlife.



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>



Photos courtesy of Cameron Spurr

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