



## Wasabi

Farm Diversification Information Service, Bendigo

September 2002

AG0618

ISSN 1329-8062

*This Agriculture Note provides information on wasabi farming.*

### Product

Wasabi (*Wasabi japonica*) is a semi-aquatic Brassica with properties similar to horseradish (*Armoracia rusticana*). It is used to produce a garnish in Japanese sashimi dishes and for making sauces. Usually it is eaten fresh by finely grating it but often lower quality wasabi is processed into a specific type of paste. The product is virtually only used in Japan where wholesale prices can be as high as \$100/kg.

Wasabi is known as one of the wild plants. *Wasabi japonica* is the cultivated variety but there is another wild variety called *Wasabi aeniensis*. Both are found growing in the wild in Japan, but because of the demand there is now an industry in growing the crop commercially.

The plant is a perennial, related to watercress (in terms of what). It has a thick creeping knobby rhizome 10cm long and 1-2 cm in diameter that is the prized part of the plant. It is usually sold with some of the leaves, which can be pickled and used. The leaves are kidney shaped and toothed with white flowers occurring on the tallish (40cm) flowering stems.

Because of the increasing pressure on agricultural land in Japan and the ever-increasing pollution, the local production is declining and other countries are attempting to grow the crop to export back to the Japanese. To date, New Zealand seems to be the only country to successfully do this but there is trial work here in Australia being carried out on the crop, particularly in Tasmania.

### Physical Requirements

Traditionally, wasabi is best produced in clear, cool (12-15C) running water, with plenty of shade in the hot months. However the crop is also grown in soil but this is considered to be inferior quality and this wasabi is mainly used for processing. Some reports from New Zealand show that the soil grown product is of similar quality to water produced wasabi and the yields are higher.

### Production

There is very little data available on the production aspects of this crop. There is some experimental work going on in New Zealand and Tasmania to develop commercial methods. One drawback has been getting good quality seed. There are a number of varieties such as Daruma

(obtained from NZ) and Tainon No.1 brought in from Taiwan. It is hoped that this work will produce results to show if the crop can be a potential commercial proposition.

### Marketing

Because of the very high prices that the Japanese are prepared to pay for top quality wasabi, there is a lot of interest from other countries in producing this crop. The Japanese production is currently about 5000 tonnes and due to increasing pressures on this local production, this may open up some opportunities for Australia. However, even in Japan, prices are very sensitive to supply so it is difficult to estimate the potential of the market.

### Financial Aspects

There has been some preliminary production cost research been undertaken in Tasmania with returns on capital for 1 ha. of soil culture production of 11%. Increasing returns are expected however as the area of cultivation increases. Obviously the very high prices received for top quality wasabi are attractive but to date only indicative models for production cost have been developed in Tasmania with estimated capital outlay for 1 ha. soil cultivated wasabi of \$155,000.

### Organisations and Contacts

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