

# Understory Crops

## Māori Investments Ltd Factsheet

*Macropiper excelsum* (Kawakawa)



### BACKGROUND

*Macropiper excelsum* or Kawakawa is endemic to New Zealand and is found throughout the North Island and as far south as Okarito and Banks Peninsula. It grows to a height of 6 metres and is found in shady gullies or shaded rocky outcrops in coastal regions. Birds eat Kawakawa berries and disperse the seeds. Both berries and leaves can be used in cooking, medicine or cosmetics.

Knowledge of this plant has been acquired through historical records and current day use in Maori medicine. Volatile oil constituents extracted from leaves, such as *myristicin* and

*elemicin* have shown anti-inflammatory action. Popular use includes treating dyspepsia, inflammation, pain relief, and use as a circulation stimulant and detoxicant. Kawakawa poultices are applied to bruises and skin abrasions to accelerate the healing process. The seeds can be used as a culinary spice.

### SITE REQUIREMENTS

**Soil:** Damp but free draining, organic soils - does not tolerate water-logging.

**Climate:** Can tolerate an open windy location but will perform better in a sheltered position and is frost tender.

## CROP MANAGEMENT

**Propagation:** Seeds or cuttings.

**Planting:** Sow seed on cultivated soil. Germination takes 2-3 months. *Macropiper* is dioecious (having separate male and female plants) so both male and female plants need to be present. Leaves are usually covered in insect holes due to damage from *Cleora scriptaria* (Kawakawa looper moth caterpillar).

## YIELDS

**Yields:** Depends on site conditions and health of plants but plants will generally grow to 1 metre after a year.

**Harvesting:** After one year leaves may be harvested all year round every fortnight. Fruits are harvested in summer. Leaves with holes in are considered ready for harvesting after larvae have been eating them.



## COSTS AND RETURNS

**Costs:** (Based on one hectare of radiata pine forest after final thinning and pruning) Seedlings and transport to site costs around \$10,130. Weed control and crop protection is estimated at \$8600. Planting costs are \$1200 and harvesting, around \$350,000.

**Returns:** Assuming a market price of \$75 per kg of dried kawakawa leaves and seeds, and a total yield of about 4,500 kg over a five-year growing period, revenue is estimated at approximately \$337,500 from a hectare of radiata pine.

## MARKET INFORMATION

Kawakawa has a number of healing properties and this is why it is regarded as 'the pharmacy of the forest'. Kawakawa is sold in two main types of products: natural and processed. Two known natural products from this plant are tea and dried seeds. Kawakawa dried seeds, which are used for propagation, are sold online at \$1,300 per kg. One kg of seeds can have more than 60,000 viable seeds which can be underplanted to over 15 hectares of radiata pine forests.

There are numerous processed Kawakawa products in the New Zealand market and these include balm, soap, ointments, headlice lotion and body butter.

There are two main types of growing Kawakawa, and these are *wild crafted and organic*. Wildcrafted Kawakawa are uncultivated plants that can be found in wilderness areas or those that grow through natural processes. However this type of collection may not be sustainable. There is also now a move to encourage organically grown Kawakawa by the issuance of organic certification. Certified organic is still new but it can be the option to grow Kawakawa in the Tarawera forest once it becomes fully established because there is additional cost and time required in the process of organic certification.

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