

Tahuri Whenua School Project



Tahuri Whenua Strategic Vision (aim)

To foster education, training and development at all levels and all relevant disciplines for Maori in the vegetable sector of the New Zealand Horticulture industry

Project Title: Taewa Maori potato growing

Time period: 20 weeks (includes summer holidays)

Project objectives

- To foster relevant involvement of Maori horticulture in primary level education
- To acknowledge matauranga Maori
- To encourage interaction of parents with children's school project
- To stimulate children's thinking on vegetable production
- To expose primary children to sense of responsibility
- Interaction with school and community
- Apply Maori values to the project

Skills

- Knowledge of seasonal planting
- Planting of a root vegetable
- Measuring and recording growth over time
- Knowledge of pest and diseases that effect potatoes
- Care and responsibility of individual potato plants
- Identifying and solving problems
- Personal and social skills, interaction with other students and parents
- The nature and role of work and acceptable attitudes to work (ethics)
- Knowledge of Maori values towards food and crops
- Internet interaction through documentation of results

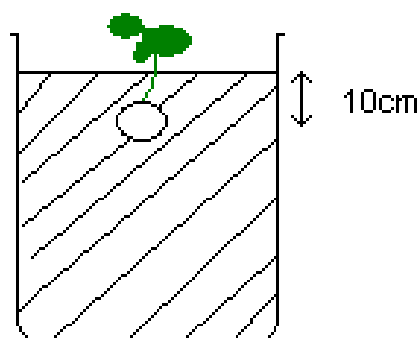
Setting: School classroom & Students home

Materials (Per student)

- 1 x plastic bucket
- 1 x seed potato
- Potting mix
- Fertiliser
- Note book

Method

- Mix fertiliser with potting mix
- Fill plastic bucket with potting mix
- Plant seed potato below the surface 10cm deep
- Soak the potting mix with water
- Green shoots should appear in 2-3 weeks
- Continue to keep soil moist – water daily (1/2 – 1 cup of water)



Conclusion/Reflection

- Document changes every two weeks taking photos of the plant and measuring the height of the plant and the number of leaves
- Record when flowering and when plant starts to die off
- Count and weigh produce once harvested



TAEWA – Maori potatoes

Before the European settlement of Aotearoa around 1840, the taewa (or riwai) was a staple food crop of the Māori. Taewa is a collective noun referring to the Māori potato - a collection of varieties of *Solanum tuberosum* now cultivated by Māori for at least 200 years.

Māori acknowledge that some varieties arrived with early explorers, sealers, and whalers during the eighteenth century. They also have traditions, which relate the existence of taewa well before this period.

The sustenance of the people was of primary importance and the success or otherwise of staple foods such as taewa impacted on the daily lives of Māori prior to modern times. However, by the 1800s, taewa had also become a commercial crop for Māori, playing an important role in their introduction to European economics.

In more recent times, some varieties of taewa were lost, but due to research and indigenous gardening projects, a few varieties have survived.

Images courtesy of Nick Roskruge



Potatoes Growing Guide



If you want the best choice of the freshest potatoes you really need to grow your own. Potatoes are grown from small tubers known as "seed potatoes". As soon as you purchase your seeds place them in a dark position (cupboard) for a week or two to allow young shoots to form.

When it's time to plant, work in lots of compost and the recommended amount of potato food.

Plant seed potatoes 10cm deep. As sprouts emerge rake soil up around the stem of the potato to prevent greening. Early crops should mature in 3-4 months and are ready when the potatoes are about the size of an egg.

GENERAL CARE

Plants need to be kept well watered for the development of good potatoes, especially when the plant is flowering. Potatoes are most susceptible to fungal attack during wet weather. Late blight can attack in spring and autumn. If weather conditions are wet and humid then preventative spraying with a fungicide such as Yates Bravo is advisable. Rotating potato crops also helps prevent fungal diseases and nematodes. Aphids and potato moth are common insect pests of the potato, and can be controlled with a general insecticide. Early crop potatoes should be eaten very soon after harvest. If you wish to store other varieties, they need to be dried and then stored in the dark. When harvesting and drying do not leave out overnight.

Potatoes are rich in vitamin C and B and contain more protein and iron than other vegetables.

Cooking them in their skin prevents the loss of nutrients

(Sourced: www.kings.co.nz)



Potatoes



Potatoes (*Solanum tuberosum* subspecies *tuberosum*) belong to the Solanaceae family that includes other important vegetables, such as tomatoes, eggplants and capsicum peppers, as well as some common weeds including nightshade and tobacco. Potatoes are annual plants that grow during the warmer months. The green tops die off or are killed by frosts as winter approaches. The potato tubers are actually swollen stems that grow under ground. If the tubers remain in the ground or are replanted after harvest they will send up shoots during the following spring and develop a new crop.



The history of potatoes

Potatoes originated in the South American countries of Peru and Bolivia. They were a staple crop in the high Andes, the mountain chain running the length of the continent, where they have been grown for several thousand years. The earliest record of potatoes in Europe comes from Spain and is dated 1573. The spread of the potato through Europe as a food item, rather than as a botanical curiosity, was a gradual process but by the 17th century it had become an important food crop especially among the poor. In Ireland during the 1800s many of the rural poor were living almost exclusively on potatoes with a little milk if they were lucky. This was possible because the potato is the best all round bundle of nutrition known to man. The earliest report of potatoes being grown in New Zealand comes from the French explorer de Surville in 1769. Captain Cook planted a garden in the Marlborough Sounds on his second visit in 1773. The Maori people were quick to see the advantages of the potato over their traditional root crop, kumara, particularly the ability of potatoes to grow in cooler climates, higher yields and easier storage. Potatoes soon became an important agricultural crop in New Zealand, both for domestic markets and export.

The potato varieties grown in the 19th century were usually deep-eyed and much rougher shaped than those seen in the market today. A combination of plant breeding, better agronomic practises and less virus has seen major increases in yield and quality. In the 1920s yields averaged about 13 tonnes/ha but have risen to over 30 tonnes/ha today.

Fifty years ago virtually all potatoes were marketed fresh and prepared and eaten in the home. Today over half the New Zealand potato crop is processed. French fries and crisps are the main products but a number of other lines are produced. However, such is the popularity of the potato that it remains the top selling vegetable in New Zealand.

Interesting fact

The potato is the fourth most widely grown food plant in the world after wheat, corn and rice. Worldwide 300 million tonnes are produced each year. A field of potatoes produces more calories and protein, more quickly, than any other crop.

Planting and harvesting

Potatoes are one of the few vegetable plants that are grown from a vegetative propagule, the seed tuber, as opposed to a true seed. This has important repercussions for the health of subsequent plants, because diseases, particularly viruses, can build up in the growing plant, including the tubers. When a tuber is replanted the following season the diseases accompany it and are transferred to the new plant.

(Source: www.gardenscience.co.nz)

