

# Growing kūmara

*While there are few early varieties available today, kūmara has been an important crop for Māori. Mike Stone talks with one teacher about growing kūmara with her class.*

## Selwyn School, Rotorua

Sue Ratcliffe teaches a class of Year 4-6 boys, 80 percent of whom are Māori. She finds a practical subject like Science works well with her students. "These are outdoor boys, they hunt and fish. They are keen to learn, but it needs to be practical to ensure high levels of engagement over time."

Each term the school chooses an atua to be the focus of learning and Sue says, "I am free to do what I like within that theme."

In term 3, 2021, the atua was Rongomatāne, responsible for cultivation and peace. As he is also closely associated with the kūmara, Sue decided to learn about growing kūmara with her students.

## Help from Te Puea

Sue discovered that kūmara are grown at nearby Te Puea Orchard, and their resident expert Te Rangikaheke Kiripatea was happy to talk with her students. "He is teaching Māori how to grow kūmara and talked with us about preparing and growing kūmara as well as the tikanga involved."

"In November we were

invited to Te Puea Orchard to help them plant hutihuti, a traditional white variety which is said to have come on the Te Arawa waka. The ground had already been prepared and covered in September/October. The tipu (shoots) were planted in slits in the polythene about 50cm apart, in two 50m rows."

## Selwyn's māra kai

The class went to work at school. "We started in spring by cutting some kūmara in half and putting them in water, cut side down, in a sunny spot. We saw shoots after about two weeks and roots after a month or so.

"In December, when our kūmara had tipu, we planted them out in our school's māra kai. We prepared the ground by removing weeds and adding compost, then we mounded up the rows and covered them in polythene. We made slits approx 50cm apart and poured two cups

of water in. The tipu were then gently placed in the soil in a J shape in direct sunlight. We did not add any more water."

In class, students learnt about growing plants, photosynthesis, plant habitats, Tāne-mahuta, Rongomatāne and classification, as well as maramataka. More recently, the boys have been learning about pests and pest control, as rabbits enjoy feasting on kūmara. They wrote about their field trips and made PowerPoints to show what they had learned.



*Kūmara growing beneath a pātaka in Te Parapara, a traditional Māori garden in Hamilton Gardens. Still from Māori TV. Left: Taputini, one of four remaining pre-European kūmara varieties. Photo: Graham Harris, Open Polytechnic/ Kuratini Tuwhera.*

*Propagating the kūmara in the classroom. Photo: Sue Radcliffe.*



An idealised Māori settlement, by Rozel Pharazyn. Kūmara gardens are at the left and centre. Where possible, gardens were on north-facing slopes so they would receive maximum sun. Image: Te Ara.

## Te waiata ‘Purea nei’

Purea nei e te hau  
Horoia e te ua  
Whitiwhitia e te rā  
Mahea ake ngā pōraruraru  
Makere ana ngā here.

[Scattered by the wind  
Washed by the rain  
And transformed by the sun,  
All doubts are swept away  
And all restraints are cast down.]

## Where to this year?

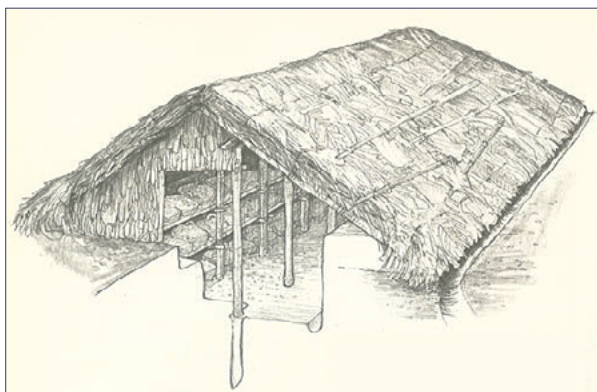
“Although we have a new atua focus for our learning now, we are continuing our kūmara journey. At the beginning of April we helped with the kūmara harvest at Te Puea. This was a formal occasion with karakia and waiata prior to the start of the harvest. We sang ‘Purea nei’, which we had learned in the classroom and Te Rangikaheke did a mihi when we got onto the whenua before the lifting of the kūmara.”

“We began by cutting the leaves off, which were put to one side for mulch and compost. Then we pulled the polythene back and started digging around with our hands to reveal the kūmara. We lifted the kūmara up and placed them in trays to cure, choosing the best ones to start the cycle again in the new season.”

“Back at school we harvested our own crop and the students could not believe the size; we got a good crop of 10-15 kg. We shared our harvest with the school whānau, as is the way in te ao Māori and many dishes were enjoyed.”

Sue says, “This learning evolved – I learnt as we went along. For me it’s about seizing the moment. Having the help and knowledge from a local expert like Te Rangikaheke made the journey just that more culturally significant for me and my boys.”

Below: The pit of this rua kūmara was dug into the ground to keep stored kūmara warm and moist, with an external drain on the right. Drawing by Nancy Tichborne, from Helen Leach, 1,000 years of gardening in NZ, Reed Publishing, 1984, p36.



## Suggested activities

- Ask students what foods their whānau grows at home. Look at the variety and perhaps classify them – roots, stalks, leaves, things with seeds (older students may appreciate the distinction botanists make between fruit with seeds, and veges without).
- Explore what things plants need to grow. Investigate the effect of removing one of these factors on a quick-growing crop (such as cress, mustard or beans).
- Research what types of fruit and vegetables would be suitable to grow in your local area, and what time of year to plant each of them.
- Learn more about the maramataka as a useful tool for gardeners.
- Discuss the costs and benefits of big and small gardens.
- Create your own māra kai, on the school grounds. Perhaps as a joint activity with Social Studies, help set up a community garden in your local area (e.g., outside the local library). Approach your local mana whenua and offer to help in their māra kai.
- Record the planting, growth, and harvesting of your crop – photograph, draw, write a story.

Planting the hutihuti variety at Te Puea Orchard. Photo: Sue Ratcliffe.



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- Research why the kūmara is considered healthier for us than potatoes (focus on the carbs!).
- Make a poster about the benefits of māra kai to the whānau.
- Create a menu of the different ways you can cook kūmara – can kūmara be made into a dessert?
- Discuss the costs of transporting and storing food produced elsewhere in Aotearoa or overseas, compared with the costs of eating locally grown seasonal produce.
- Our earliest kūmara crops were brought to Aotearoa by Polynesians between 1250 and 1300 CE. Find out more about the history of kūmara in Aotearoa:
  - What is whakapapa of the kūmara? How does it whakapapa back to the Polynesian kūmara?
  - Talk, kanohi ki te kanohi, with your kaumātua/kuia. What local tikanga and pūrākau, waiata, karakia do they use when working in the māra kai or specifically when working with kūmara? Why is it so important to follow such tikanga?
  - What were the differences between growing kūmara in Polynesia and in Aotearoa? Explore mauri and kaitiakitanga – how did Māori ensure the kūmara grew well?
    - What environmental conditions helped kūmara grow in some places and not in others?
    - How did those first Māori gardeners keep the soil drained and warm, and protect the crop from wind and drying out?
    - How and why did Māori store kūmara?
    - How do we know? Remember Māori histories are all oral – so where could we look to find the mātauranga Māori relating to the kūmara? Is there any physical evidence?
    - Find out why some hapū trained seagulls for their kūmara crop.
- These students grew hutihuti, one of the many traditional species. Find out the names of some other early kūmara varieties. What species are grown here now?

- From all of this information, why do you think the kūmara became an important crop for early Māori in Aotearoa, when it had not been so important in Polynesia?

### Useful resources

Education Perfect Science

Alive Mātauranga – [plant life cycle, mauri and kūmara](#). Register [here for these free resources](#).

Video about these students at Te Puea

Orchard on Māori youth news series *Ohinga* (5m): [How to harvest kūmara – ‘Māori can’t connect to a carrot’](#).

Science Learning Hub, [Kūmara resources](#).



*Statue of Rongomātāne in front of a māra ora on Opanuku Stream path, west Auckland. Photo: Mike Stone.*



*A Selwyn student holding part of their crop. Photo: Sue Ratcliffe.*

### Ngā Kupu

**Hauhake** – To harvest (a root crop)

**Huanga kai** – Crop

**Kaingaki māra** – Gardener

**Kauhuri** – To turn over soil; cultivation

**Mahi māra** – To garden, gardening

**Māra kai** – Food garden

**Maramataka** – Māori lunar calendar

**Puke** – Mound, hill, hillock

**Rua kūmara** – Rectangular pit for storing live kūmara

**Tipu** – Shoot, bud; to grow or sprout.

*Te Aka Māori Dictionary and Paekupu*



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