

Kia ora, gday and welcome to the History of Aotearoa New Zealand. Episode 49: Dank Weeds. This podcast is supported by our amazing Patrons. If you want to support HANZ go to patreon.com/historyaotearoa. Last time, we talked more about how Māori gardens were actually made and how they were developed along with the fertiliser they used and how the process of planting worked. This time we are going to continue on the timeline of growing food from the putting it in the ground stage to the trying to make sure it doesn't die while growing stage through to the taking it out of the ground to eat stage.

So let's start with what to do as they crops are growing. Māori didn't water their plants according to Best so the primary form of care for the fields was weeding. Before we can get into how this worked, why it was important and all things related to weeding we really should define what a weed is. I realise this may seem a bit silly, it was to me when I first read it. A weed is a weed, it has a universal meaning. Well, yes and no. Weed in the European context means any plant that is considered undesirable by humans in the context it grows, the most obvious form of this being those random leafy plants in your garden or crop fields but can also encompass things like dandelions in your lawn or even raspberries in your rose garden. So even there you already have a bit of a messy definition. Raspberries, on their own, are generally considered quite good given that they provide berries that are pretty tasty. However, they are also fast growing and propegate widely via runners underground that then pop up a little distance away, something you don't really want if you're trying to keep a nice rose garden. So depending on where they are and what the owner intends to use the land for, they can be either a crop or a weed. The term is also usually used to refer to small, fast growing plants that propegate quickly but there are plants that many would deem weeds that don't fit this description. Or that do fit this but aren't considered weeds, again like the raspberries. What I'm trying to get across is that the term weed is context specific rather than botanical in its nature, kinda like how the word vegetable is a culinary term. In general, European languages have words for weeds that are often made up of their word for plant prefixed by a negative qualifier, so for Europe a weed is referred to as a 'bad plant'.

On the flip side, Polynesians seem to have had a similar concept of a weed with their words indicating a negative connotation. The article that I used as the main reference for this specifically points out the Tahitian creation story, the story of the principal ancestor of Rapa Nui, Easter Island, and a Tongan story of Māui. The article points out that you encounter a bit of a problem when you start looking at most Polynesian oral stories, not just for finding out if they had the same European concept of a weed but trying to figure out basically anything. The devil is in the translation cause all of these stories were researched by European scholars to learn more about the cultures they had just encountered. However, they didn't know how to read any Polynesian languages so they needed to read ones that had been translated into their native tongue. The issue with that is you can get a lot of bias or just plain misunderstanding from the translator, in the case of these three stories it seems that the Europeans who were translating them misunderstood Polynesian views because they were coming at the translation from a European headspace. In particular, the idea that certain plants were seen as bad. For example, in the Tahitian creation story, a sentence translates to 'weeds grew and increased', but it's possible that the word that was translated into weeds is a more generic term for leaves or foliage. So, no negative connotation there. We see a similar pattern in the Rapa Nui story with a word that was translated into weeds may just mean young shoots. The Tongan story describes the earth being weeded, as in the act of removing weeds. In this case it may just be a misunderstanding of the difference being removing bad plants from already cultivated land and clearing land of bush for cultivation. There is of course a bit of leeway here as this is the kinda immaterial part of a culture that is hard to pin down and define, so don't take this as gospel. For Māori specifically, well the sources seem to not really agree. Cook recorded when he saw Māori

gardens “the ground is completely cleared of weeds”. This would indicate that weeding was indeed done but the another source also claims that weeding wasn’t really a thing before European arrival due to the way cultivated crops grew resulting in weeds being naturally excluded. Other sources claim that the first weeding was quite tapu, with workers gathering around the same hangi pit that was used to cook the kumara during the planting. A stone was taken from the pit and was passed right to left around the circle before being put back in. The weeding then commenced and after the days work the same ceremony was performed again. During the whole days work, and even the planting and harvesting, the workers wouldn’t communicate with those back home in the kainga due to the tapu. All of this would indicate that weeding was definitely done and actually pretty important. However, it is likely that Māori didn’t have that concept of a weed as a bad plant, remember Tahiti and that area is potentially where the Great Migration came from and as we have just discussed, they didn’t have that view. So my very unprofessional take is that there is definitely something getting lost in translation here. Europeans not understanding that Māori may not even have the same world view as them seems like it has coloured the way their observations have been made and as such subsequent research has been influenced by this. I’m not saying that Māori definitely did or did not perform weeding but the waters do seem to be a lot more muddy than it may initially appear. It is also possible that the Māori style of horticulture just didn’t require weeding but due to how Europeans grew food it seems to have resulted in this change in thought in Māori seeing certain plants as bad. This again would stir the historical record a bit for anyone like Best asking questions in the early 20th century.

With all that said, when I use the term ‘weed’ in this episode I am using the European concept of any plant that is considered undesirable by humans in the context it grows. Primarily in our case that context is horticulture. Weeds native to New Zealand weren’t the only ones that were found here though. Māori brought over their own seeds, either intentionally or accidentally and over time some of those plants became naturalised, basically meaning that they are present in the wild and reproduce, thus adapting to the different conditions. The observations made by Cook and his botanist Banks were particularly helpful in figuring out what plants were native or naturalised from the samples they took. Māori weren’t the only ones who brought their own plants, Europeans brought a whole range of new flora to Aotearoa. Again, some intentionally and some not so much. We will talk more about how horticulture in general changed after European arrival in another episode but for now I just want to focus how this occurred in regards to weeds. One of the first European recorded instances of weeding in New Zealand was made by missionary Samuel Marsden in 1815. He saw the blind wife of a chief walking along a garden and pulling up weeds. She would then step on them to make sure she knew where they were and throw ‘mould’ on them supposedly to kill the weeds and stop the growth. At this point it is likely that the weeds she was pulling up were introduced from Europe rather than anything already in New Zealand before Cook. The kind of plants she may have been pulling up were things like cabbages, radish, turnip, spinach, celery, carrots and parsnip. These had all returned to their more naturalised state in the New Zealand bush once they, I guess you would say escaped? This meant they didn’t have those pesky humans trying to breed various traits into their lineage like increased size or more flavour so they were generally a lot smaller and not really the kinda thing you would expect to see on the supermarket shelf. Leeks were also observed wild and free, roaming the fields of Northland by Darwin. Yes, THAT Darwin. The father of natural selection also saw large leafed dock, a weed that was common in Europe, and said would “for ever remain a proof of the rascality of an Englishman, who sold the seeds for those of the tobacco plant”. If you’re picking up what he’s putting down there, that gives a little hint to what we will talk about when we address European plants as a whole.

By the 1840s weeds and degenerated vegetables that the average European would recognise were widespread throughout Aotearoa, with the former being seen by Māori as a threat to the productivity of their gardens. Being in a new land that wasn't used to having them, just like introduced animals, these alien plants grabbed any available space they could, being spread by the wind, birds along with other animals and of course, people. All of this adding to the work Māori needed to do to ensure they kept their fields clear so they could feed themselves. This kinda fed into this idea that cropped up in 1844 that European weeds could "exterminate and supersede the original possessors of the soil." It wasn't long before this became a widely held view by Pākehā, who had recently been granted sovereignty over the country and independence under the Treaty of Waitangi. I realise my use of the word 'sovereignty' here is problematic and some of you may be yelling at your phones but what I'm trying to get across is the attitude of the people at the time, rather than what actually happened. Cause what we see is that this attitude of European weeds being superior as to exterminate and supersede the original possessors of the soil is extended to trees, birds and of course Māori themselves. Add in a dash of Darwin's theory of survival of the fittest and you can see how this might have gotten a bit out of control. Supposedly New Zealand plants were "powerless when it comes to competition with the European plants, which by natural selection have become the very elite of the weed-world" with the implication being that by extension this applied to Māori-European relations as well. In short, Europeans were using weeds as a tool to justify the colonisation, suppression and in some cases extermination of Māori and their culture. A theme that has and will continue to come up again and again in our story. In saying that though, it would be unfair to tar all Europeans with the same brush, cause some did see the spreading of European weeds for what it was; foreign plants spreading in a land that wasn't used to them and had no way to slow their growth.

While Māori were pretty annoyed about the spread of things like dock plants, on the flip side, European farmers were none too happy about the spread of native species, such as bracken and mānuka, which may have actually been growing more aggressively than European crops. Bracken, which is a large fern, was considered one of the worst culprits along with tauhinu, a small shrub sometimes called cottonwood. In fact, tauhinu gave farmers such a hard time that it would be added as a third schedule weed of the Noxious Weeds Act 1908, the first native plant to do so. What this meant in practice is that any local authority could declare it noxious, that is to say harmful, which would allow them to take steps to eradicating it and punish those for spreading it, along with any other steps they deemed necessary. To give you an idea of where tauhinu sat in regards to other plants, some third schedule plants you may recognise from this act are gorse, wild turnips, fennel and hemlock. The reason I know this is cause I read the Act itself which was somewhat of an eye opener for me cause I actually really enjoyed it. For instance, one of the interesting things I saw was that blackberries were part of the second schedule, deemed national noxious weeds. Basically these were considered weeds across the country and you could remove them with impunity and face fines for spreading them or even just not removing them when you found them. In the case of bracken and mānuka, they weren't put into the Noxious Weeds Act, however they were excluded from the Native Plants Protection Act 1934, basically placing them in this weird limbo of they aren't protected but you aren't legally obligated to remove them either. Part of the reason I am making such a fuss about this is that the Wildlife Act 1953, the act that currently dictates what animal species are protected and which aren't, operates on a similar premise. And I've had occasion to read this Act in my day job as I have sometimes had to work within its bounds. Also, because this is I guess what HANZ is gonna be like when parliament becomes a thing, so, get hyped?

Weeds weren't the only thing Māori needed to combat though. As we mentioned a couple of episodes ago, different types of fences needed to be erected to keep out European pigs but even

before that, Māori had their own local pest they had to contend with. Remember the āwheto? The little caterpillar that they used to make ink for tā moko. Well, apparently it had quite the appetite for kūmara and a lot of effort was put in to get rid of them. However, I would say that these caterpillars wouldn't be used to make ink as they would have been missing the key ingredient of the fungus that infected them. Best also says that along with human efforts to get rid of āwheto, tame seagulls would get amongst it as well. The other animal that you might think Māori had an issue with was the kiore or Pacific Rat, brought over during the Great Migration, but apparently they were pretty chill. It wasn't until the huge Norway Rat was brought over that rats really became a problem for crops. One of the ways Māori got rid of rats and other pests was to burn kawakawa leaves or kauri gum in the fields. I'm not entirely sure how this worked though, I would assume there was some sort of compound in them that animals weren't super keen on.

Once you have spent all that time caring for your crops at some point you should spot Whānui on the horizon, also known as the star Vega. This was the signal that the hauhakenga or hauhake should begin, the harvest. Like the planting, the harvest was a tapu event and when it was underway similar ceremonies and restrictions would be observed. The first few tubers to be brought up would be offered to the gods or Matariki with a few being cooked and eaten by the tohunga or other relevant ranking person. Once underway, the workers would fast so if the job wasn't done by early afternoon, they would continue the next day, presumably to stop anyone collapsing from a combination of hard work and hunger. The kūmara would then be dried for a bit to remove any major moisture and then sorted based on size and to check if any had bruises. This was extremely important as any kūmara that had bruises wouldn't keep in the storage pits, instead they would rot and potentially ruin the whole crop as a result. So any that were bruised were set aside for immediate use. The harvest was then transported to the storage pits in large baskets, again being careful not to bruise them. The pit was filled from back to front as a matter of tapu, something that may have arisen because that's really the most efficient way of doing it if you have lots of people going in and out all the time. The kūmara would be stacked carefully for storage before the pit was shut until needed later. As with planting, women were allowed to do certain tasks but not others and they certainly weren't allowed to work if they were menstruating.

In preparation for storage, sometimes the kūmara would be dried further. What this would involve is the surface of the tuber being scraped with a shell or piece of wood, possibly to just remove the dirt rather than the skin. They were then sun dried on a platform before being put into a hangi, stacking them in layers with leaves between each layer. A stick would be placed into the hangi right down to the bottom layer where the stones were and the whole thing covered with dirt. Water was then poured onto the stick to get the hangi going. Best doesn't mention this but I presume the stick was spun around a bit to make a hole so that the water could get right down to the hot rocks to create steam, however that is just my speculation. The hangi would be left to steam for the next 12-16hrs until opened up the next day, revealing the now soft kūmara. The tubers would be promptly sun dried again to harden them and make them keep better, sometimes with a fire to speed this process up. When eaten later, kūmara dried in this fashion might be put over a fire to soften them again or crumbled up and mixed with water to make a porridge like food.

Once the tubers were in storage a few were likely still taken out by rot due to dampness or low temperatures. Those that survived were replanted meaning that Māori were unconsciously selecting for rapid maturing, since only matured tubers were stored and had the ability to last the whole six months of storage. A similar situation likely occurred with yams as well.

Next time, we will discuss some of the major cultivated plants in more depth such as kumara, yams, gourds and taro. We will also talk a bit about how Māori named various plants when they got here based on what they already knew from their previous home in East Polynesia.

If you want to send me feedback, ask a question, suggest a topic or just have a chinwag you can find my email and social media on historyaotearoa.com. This podcast is a one man band, if you enjoy listening to me talk history, you can support us through Patreon, buy merch or give us a review, it means a lot and helps spread the story of Aotearoa New Zealand. As always, haere tū atu, hoki tū mai. See you next time!!