



## THE IMPACT OF NORTHLAND'S SUMMER DROUGHT IN OUR NATIVE FORESTS & TREE PLANTINGS

*Written by Peter Berg, March 2020*

The summer of 2019/2020 has been particularly tough in parts of Northland –alongside the Kaipara Harbour they have had less than 30mls of precipitation since December, water tankers have been the busiest they can remember and drought is taking its toll on some of our bush reserves.



Most notable is the very obvious die-back in the crowns of taraire, and often in very large, mature trees that have been growing on the same spot for many years . New Zealand Forest Service records indicate that similar death and/or dieback has occurred before – the series of droughts in Northland in the early 1970s caused significant tree mortality even in the pine plantations and particularly in some of the coastal plantings north of Pakiri. However at that time taraire was also identified as one of the species most impacted although many species in the understory were also affected.

However this time around a number of other species are showing all of the signs of severe stress or have been killed – in the extensive plantings alongside the Northern Motorway north of Albany manuka planted 7-8 years ago is also being killed, although the death is fairly randomly spread through the plantings.

Manuka, dead or dying can be found in a number of places in plantings along the Northern Motorway. These plantings are well established having been in place for 7-8 years. However it is also likely that a lot of soil was removed or shifted during road construction and root development could have been restricted.



Other species planted at much the same time including kauri and even totara are similarly dead or dying – demonstrating that selecting the right species for the planting site is going to be even more important in these times of changing climate. Tree roots growing in damper conditions are not usually so wide spreading, and if the ground suddenly dries out they may not have time to adjust to the changing conditions.



Left -Five year old kauri only 2m apart shows drought damage to the tree in the foreground, and right totara clearly stressed but hanging on. These trees were planted in a riparian situation but this year the stream is dry, and it appears the tree roots haven't had time to adjust to the dry stream banks.

There are many other accounts of die-back in taraire usually relating to drier than usual conditions, and often the crown will recover over a few years.... however the notable impact of drought is certainly a consideration when it comes to planting. Nevertheless they are also a great source of food for kereru so it's still worth including them in your planting mix – but remember care needs to be taken to make sure exposure to wind and sun and the soil drying out is accounted for when selecting your planting site.

So another project for your COVID live in.... check what other native trees appear to be more or less susceptible to these dry conditions, and tell us a little bit about their situation.