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| Trial # | 7 |
| Location | Waitane |
| Province | Southland |
| Farm Type | Forest |
| Product Trial | FPF on Pine Trees |
| Date | 1994 - 1996 |

Introduction: FPF was applied to areas **planted** in Pinus Radiata to assess the effects on nutrient uptake and tree performance. Fertiliser was applied on 12/11/1994 by helicopter at three different application rates (50,75,100kg/ha.) to blocks of different aged trees (10,15 & 19 years old). In each block, a control plot received no fertiliser. Leaf samples were analysed in March & June 95 & in April 96. The trials were conducted in association with Craigpine, a forestry company.

Treatments:

The treatments were based on the following blend (based on 75kg/ha).

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| DAP | 45kg/ha |
| ES | 3.75kg/ha |
| LF | 25.1kg/ha |
| Magnesium Sulphate | 0.2kg/ha |
| Boric Acid | 1.125kg/ha |
| Trace Element Mix | 1kg/ha |

Results:

FPF applied at 75kg/ha to 10 year old trees. (Blk CPT54). Leaf samples showed slight increases in N,K and S. Mg levels were lifted on average by 33% over the control. P levels were improved by 16% on average, though levels in both the FPF treated and control plots were in the desired range.

Of the trace elements, increases were recorded in the levels of Mn (66%), Cu (10%) and B (18%). These increases improved over the 17 months of sampling from application, indicating that the FPF was impacting soil nutrient availability since foliar uptake effect would have waned by this stage.

FPF applied at 50kg/ha to 15 year old trees. (Blk CPT 52). Leaf samples showed inconsistent results compared to the previous block (CPT 54). It is not known whether this was the result of sampling variation or the lower application rate (50kg/ha cf 75kg/ha).

FPF applied at 100kg/ha to 19 year old trees. (Blk CPT44). Leaf samples indicated increases in K,Cu & B and slight drops in N,P,Ca & Mg. However, there was a large degree of variation between the relative results per sampling date, making it difficult to draw definitive conclusions.

Overall, the results suggest there is an increased response for K and a decreased response for Mn with increasing tree age. It also appeared that as the application rate of the fertiliser increased, the Ca levels decreased and the B levels increased. However, it appears that the age of the trees does not seem to play a major role in terms of responsiveness to FPF. At all rates of application, there was **no problem with burning the foliage.**