

Soon after this disastrous period in Canterbury, torrential rainstorms interfered with forestry work farther south. The township of Milton, where a new forest nursery was being broken in, experienced 5 in. of rain in twenty-four hours, a record which seriously interrupted the job of tile and mole draining and ploughing which was in progress at the time, and delayed in consequence all of the other numerous preliminary details of work involved in large-scale nursery formation.

The spring that followed was, throughout the South Island in particular, cold and wet. Seed-sowing was of necessity delayed in the heavy clay soil at Milton, and seed-germination was irregular and took place too long after sowing. Weeds of arable land, however, germinated apace, and the new nursery faced a weeding problem such as the Forest Service had not encountered for years. Exactly the same sequence of events occurred at Tapanui, where a portion of the old Tapanui Nursery was reopened. Farther north, at Ashley Forest in Canterbury, the unseasonable spring and early summer weather culminated in a hailstorm which struck the nursery on the anniversary of the hailstorm of December, 1944, recorded in last year's report. A large crop of line-sown pine had partially germinated and was in the seed-leaf stage with the seed testas still adhering to the seedlings. Naturally, this crop was completely ruined. Still farther north, at Golden Downs, a heavy rainstorm caused sudden flood in the Motueka River and an overflow from an old river channel through the nursery. Losses in this case were also very considerable.

The summer, thus delayed, proved when it did arrive to be one of almost unparalleled dryness, particularly in many parts of the North Island. Temperatures were not excessively high, but there were very long periods when no rain fell and when the humidity was continuously low. Nursery stock suffered severely from drought both at Waipoua and Rotoehu, and a period of forest-fire hazard of great intensity developed in early February, especially in the Taupo, Bay of Plenty, Coromandel, and North Auckland districts. Settlers' and accidental fires which would normally have been of small moment were fanned to conflagration dimensions by a violent gale, estimated at 70 m.p.h., which traversed South Auckland province throughout the whole of a night in early February, when relative humidity had been low for over a week. The results were the Coromandel and the Taupo fires, described elsewhere in this report. During the same period the Wairarapa and Nelson districts experienced fire outbreaks of considerable size, and one Wairarapa State forest of 3,000 acres was ruined for over two-thirds of its area by a settler's fire which started at least two miles away from the forest edge.

The climatic perversity of the season was immediately demonstrated by a deluge over the most hotly burned area a week after the fire itself. This was at Taupo, where a particularly fierce ground and crown fire had consumed an area of 30,000 acres of exotic forest in the thicket stage. The intensity of the fire was such that all ground debris was consumed and most of the limbs were burned from the pine poles. The soil was the finest and lightest of pumice. On this newly bared soil some 3 in. of rain fell in the one day, with great resultant scour of the light soil.

The long dry period of February and March, besides creating the fire hazard, caused many deaths in exotic conifers from sheer drought. As usual, these occurred more among shelter and ornamental planting on farm lands unsuited for forests than in State forests. Such losses were very noticeable in the vicinity of Taupo Township and on the drier shingle plains of Hawke's Bay, where already decimated stands of insignis pine in many cases received the *coup de grace*. More moisture-loving species, such as Douglas fir, redwood, and cypresses of all species, were lost in many ornamental belts planted within the last twenty years.

All of these cases must be regarded as Nature's inevitable retribution for planting species out of their safe and correct habitats.

Not in quite the same category was the much more unusual phenomenon of wilting and frequent death of advance growth and natural seedlings of indigenous species in untouched native forest. The forest floor was in places so dry that wilt and death of the floor population of seedlings and saplings was very evident. In one large scenic