

largest loser by fire already operates several sawmills, but is not carrying out any large-scale salvage work. Nevertheless, as an exploratory effort, the Forest Service made an offer to those companies not possessing mills that it would investigate the possibility of organizing a second shift at its Waipa Mill if they could deliver their logs to Waipa at ruling prices, but nothing practicable came out of the offer.

During the year fire destroyed 12 (2) sawmills or box-factories, as follows:—

Sawmills—

Ellis and Burnand, Ltd., Mangapeehi (Auckland Conservancy).  
 Morningside Timber Co., Ltd., Omahuta (Auckland Conservancy).  
 Pohokura Timber Co., Ltd., Pohokura (Rotorua Conservancy).  
 C. P. and P. D. Smith and Co., Ltd., Taumarunui (Wellington Conservancy).  
 J. J. Orbell, Hastings (Wellington Conservancy).  
 Dominion Timber Co., Ltd., Owhango (Wellington Conservancy).  
 Ogilvie and Co., Ltd., Marsden (Westland Conservancy).  
 N.Z. Refrigerating Co., Ltd., Islington (Canterbury Conservancy).  
 Carroll and Co., Gore (Southland Conservancy).

Box-factories—

K.D.V. Boxes, Ltd., Morningside (Auckland Conservancy).  
 T. W. Wall, Ltd., Owhango (Wellington Conservancy).  
 Saunders Kiln Dried Timber Co., Ltd., Lower Hutt (Wellington Conservancy).

There are no satisfactory figures of the total amount of sawn-timber stocks destroyed in these fires, but with few exceptions losses were not large.

44. *Fire Detection and Control.*—During the February fires in the Taupo district humidity observations and fuel moisture sticks proved their infallibility as fire-risk indicators. Insufficient attention, however, was accorded the readings, and to prevent this happening in future an officer has been specially assigned to developing a fire-hazard meter which will enable all members of the staff better to assess current fire conditions and to take prompt and appropriate measures to avert a similar emergency. There appears to be little doubt that legislative power must be secured under which, when the fire hazard becomes unduly high, forest officers or the local authorities may declare a fire emergency, during the period of which no person shall be permitted to light any fires whatever out in the open.

An analysis of records taken in the Rotorua district shows that relative humidities at 9 a.m. were below 45 per cent. on fourteen days during December, January, and February at Rotochu, on seven days at Whakarewarewa Nursery, on three days at Wairapukao, and on one or two days at each of four other stations. Maximum hazard was between 1 p.m. and 4 p.m. Relative humidity readings taken at those times were below 45 per cent. on forty-four days at Wairapukao, on thirty-two days at Kaingaroa, and on fifteen or more days at other stations (records for Rotochu and Whakarewarewa Nursery are available only for 9 a.m.), the readings indicating that stations at lower altitudes in the hazard areas do not show the same overnight rise in relative humidity as stations at higher altitudes. During this period the rainfall was far below average, temperatures were above average, and there were relative humidities below 20 per cent. on several occasions, and the cumulative drying effect of these factors on the taller vegetation, the ground cover, the soil, and the peat brought about conditions of extreme hazard in February. At Kaingaroa Station readings at standard times of observation disclosed sixty-three occasions on which the arbitrary danger point was reached, as compared with four, fifteen, and twelve occasions respectively during the three preceding fire seasons.

One additional station for recording fire-hazard conditions has been set up at Granville, on the west coast.