

buildings (freezing-works, dairy factories, timber-mills, &c.) situated outside fire districts and the brigades will, as part of the service given, carry out regular practical training on the premises and under the conditions which would apply should a fire occur. The service, providing as it does some protection not at present existing, has a definite national value and justifies to some extent the increased contributions towards the general service costs to be paid by both Government and the underwriters.

### *Taupo Forest Fires*

8. The development of both the forestry fire-protection system and the Fire Service emergency organization must of necessity be influenced by the experience gained during the forest-fire emergency in the Taupo-Rotorua area during the early months of 1946. A brief study of the conditions is therefore desirable. The area in exotic forests exceeds half a million acres and consists of a belt of plantations extending in an irregular pattern from the vicinity of Te Teko in the Bay of Plenty almost to Putaruru in the west and southwards across the Napier-Taupo Road. The land is light pumice country and most of the forest blocks are bounded by scrub and fern lands. The latter are only being brought into cultivation slowly and it appears likely that much of these areas will remain for many years, if not permanently, as waste land and therefore a potential menace to the forests. About half the planted area is State forest and the balance is owned by a number of forestry companies. The forest is in all stages of growth and is in, or ready for, production in about one-sixth of the area.

9. The plantations have until this year been singularly free from serious fires. Small fires have, of course, occurred from carelessness in burning off, from through-traffic road hazards, and from trespass. These have been dealt with by the plantation crews without difficulty, using mainly manual equipment (shovels, &c.). The friable nature of the pumice soil has contributed largely to this success. Because of it there had grown up a considerable body of opinion amongst foresters that the use of water for fire-extinction was not necessary in this class of country. Much of the area is very sparsely watered and the provision of reserve supplies of static water at strategic points is an expensive matter. It is therefore not to be wondered at that until very recent times the fire-protection organization has - apart from the provision and maintenance of fire-breaks and access roadways - been concentrated on a lookout system and other methods of early fire-detection and relied on quick operation by manual methods for fire-extinction.

10. Scrub fires in the waste-land areas adjoining the plantations are of frequent occurrence, mostly due to roadside carelessness and the lighting of fires for singeing pigs by hunters. It has been the practice of the State Forest Service and the forestry companies to keep a fire watch over these areas and to deal with any fires considered likely to endanger the forest. Other fires were allowed to burn unrestricted. They were held by some people to be beneficial in fern lands because a safe burn would remove the danger to the forest until fresh growth dried out, and in scrub land because such fires prevented accumulations of large scrub and self-sown pines which would carry a heavy fire. In the 1943-44 fire season several of these fires in the vicinity of Taupo reached serious proportions and not only threatened the forest areas, but also the townships of Wairakei and Taupo. A number of conferences was therefore held in an endeavour to arrange for the control of the waste-land fires in the incipient stages, even though they were not an immediate menace. Both financial and legal difficulties were met. The waste land is largely Maori-owned or Crown land. It is non-productive, non-taxable, and not controlled by any local authority. It is not included in any rural fire district and there is at present no legislation under which the lighting of fires can be prohibited, controlled, or policed.

11. The State Forest Service was about this time experimenting in the development of a water-carrying fire-engine, utilizing a type of chassis released by Army. This had been designed for an armoured car and was therefore suitable for weight-carrying and