

Portable gasoline pumps and linen fire hose are important items of equipment and are carried by canoe, motor boat, automobile, aircraft, pack-saddle or back-pack. The pumps provide hose pressures of up to 250 lb. per sq. inch, depending upon the elevation above and distance from the water supply; hose lines of over a mile in length are frequently used. Small hand pumps supplied by 5 gallon portable containers are also effective. Bulldozers and ploughs are commonly used for fire line construction and trucks fitted with water tanks and power pumps are employed for the control of fires adjacent to roads. Despite the provision of these mechanical aids more than 50 p.c. of all fires are fought with hand tools.

The various government forest authorities conduct forest conservation publicity independently and in co-operation with the Canadian Forestry Association. Since its beginning in 1900 the CFA has played an important part in securing popular co-operation in reducing the fire hazard. By means of its magazine, which has a large circulation, by railway lecture cars and motor trucks provided with motion picture equipment, and by co-operation with radio broadcasting stations and the press, the Association reaches a large proportion of the population of Canada. Efforts are made through the schools, by specially appointed junior forest wardens and other means, to educate the younger generation on the value of the forests and on the seriousness of the devastation caused by fire and the means of preventing such devastation.

Forest Fire Statistics.—During 1954 there were 3,022 forest fires in Canada compared with 6,440 in 1953 and an average of 5,434 for the period 1944-53. This is the smallest number of forest fires since 1929, the year in which the Forestry Branch of the Department of Northern Affairs and National Resources commenced keeping detailed, countrywide, forest fire records.

Probably the best available indicator of forest fire loss is the *area* burned. In 1954 for example only slightly more than a quarter of a million acres were damaged or destroyed; this was about one-sixth the annual average loss during the ten year period ending in 1953, and only 43 p.c. of the next lowest loss in any one year. The small acreage burned in 1954 was directly reflected in the 88-acre average fire for the year as compared with the 292-acre ten year average—the alltime low recorded. The estimated values destroyed in 1954 were only 37 p.c. of the 1953 losses and 40 p.c. of the average annual loss over the previous ten years.

During 1953 Newfoundland had one of the best fire seasons it had experienced for many years, the total area burned being less than 15 p.c. of the average for the preceding four years. In Nova Scotia spring fires accounted for about 70 p.c. of the area burned during the year but the fire season as a whole was considered to be about average. New Brunswick did not have a severe fire season; 1953 however was a bad year for Quebec, with most portions of the Province having some periods of very dry weather; there were more than twice the usual number of fires and the area burned amounted to more than ten times the average for the previous ten years. In Ontario October and the early part of November were exceptionally warm and dry and throughout the whole fire season the general weather pattern was fair and warm. The hazardous fire season in Manitoba commenced in April when the northern regions experienced hot, dry weather which continued until the end of June; another dangerous period developed in late July and August. Rainfall in Saskatchewan was inadequate over the forested areas during April, May and June and 98 p.c. of the losses for the year occurred during that period. Alberta and British Columbia were favoured with light fire losses as there were no prolonged periods of dry weather. The Northwest Territories experienced a severe fire season which ran from April to August, the latter month being particularly warm and dry. The three fires which burned in Yukon Territory during July accounted for more than 80 p.c. of the area lost during the entire year but generally the fire season was not considered hazardous.

During 1954, owing largely to above normal precipitation, Newfoundland enjoyed an excellent season from a fire protection standpoint. In Nova Scotia the number of forest fires in the spring was greater than the average for the previous decade, and about