

## EDGE BURNING IN PINUS PINASTER

by

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The area most susceptible to severe crown scorch in a *P. pinaster* burn is of course the exposed outer compartment edge and this for several reasons such as:—

- (a) the rapid drying of edge fuel.
- (b) strong wind turbulence and
- (c) heavy 'edge effect' fuels which are greatly increased by the current, costly and laborious practice of pulling in thinning tops and pruning slash. The abolition of this practice and its replacement by the cheaper practice of edge burning would at the same time cut costs and eliminate edge scorching; it would, furthermore, allow the O.I.C. of a burn to take his mind off the edges and concentrate his attention on the bit that really matters i.e. the actual burn itself.

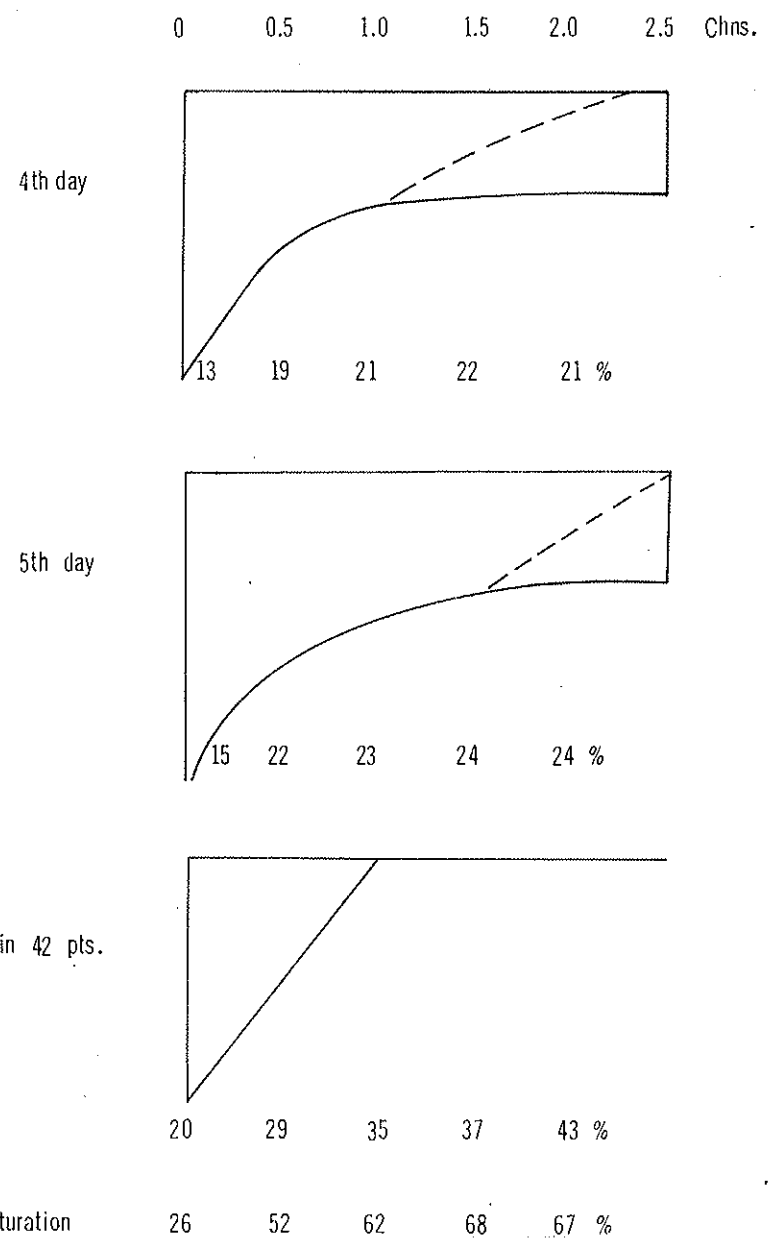
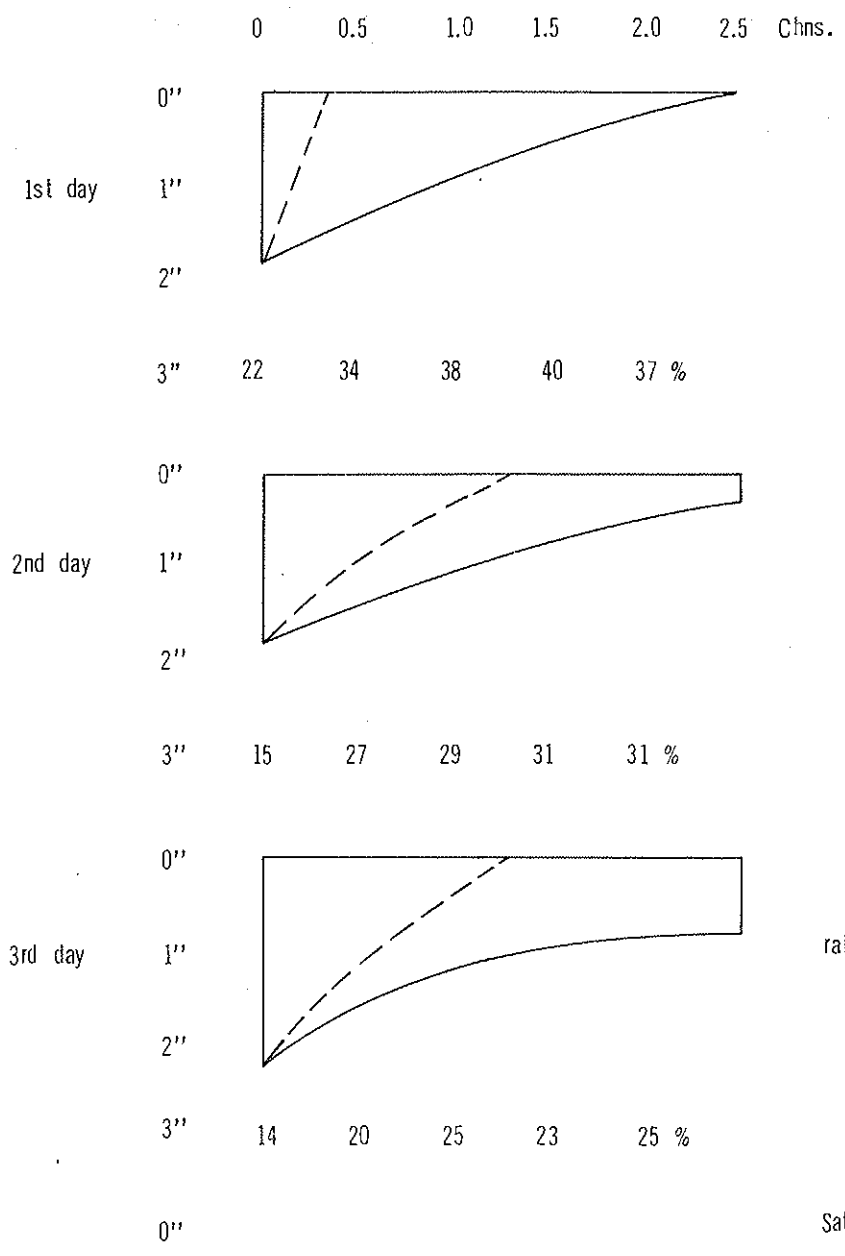
An edge effect study carried out in 14 years old, unthinned *P. pinaster* in McLarty's plantation provided the edge drying pattern and a typical edge drying trend commencing one day after rain which saturated the fuel bed completely is illustrated.

Fuel moisture content and dry fuel depths were measured at 3 p.m. daily after rain until rain commenced on the sixth day (re illus). These measurements taken at half chain intervals inward from the compartment edge to a distance of two and a half chains indicated that several days occurred in which edge burning could have been carried out safely to a distance of approximately one chain inward since ignition of the surface litter can only be obtained at the 25-30% moisture content level.

The fuel contour areas illustrated represent that part of the total fuel profile free from surplus moisture, the actual fuel bed being five to six inches deep. The areas above the broken lines indicate the amount of fuel available at ignition moisture content.

Owing to intermittent rainfall periods experienced throughout the winter season there is often occasion when edge burning can take place but when complete burning cannot be carried out; in fact, a considerable percentage of experimental spot fires run in unthinned *P. pinaster* over the past six years by fire research staff have been run along compartment edges to a depth of one to two chains since dry fuel was unobtainable within the compartments.

The drying trend illustrated occurred in mid-May 1969. Further testing showed that the drying pattern held good throughout the winter months with slightly less penetration around late June and July.



PINUS PINASTER FUEL - EDGE DRYING PROFILES.