THE VALUE OF WINTER BURNING UNDER PINES

by

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Protective burning under P. pinaster was started at Somerville in 1965 after some earlier experiments elsewhere. In that year it was still on a trial basis and only a small area was burnt but subsequent annual burning progressively reduced the ground litter over most of the plantation. By now (May 1971) some 80% of the planted 1,800 acres have been winter burnt more than once.

Within the same period since 1965 this Metropolitan plantation has withstood a total of 102 wildfires.

Consequently we now have a fairly good picture of the progressive effects of winter burning. We can see how it has reduced not only the severity of summer fires but also the total cost of fire protection.

In the table below is the number and severity of pine fires in successive years.

Severity shows up in terms of average size and suppression cost. The latter is the wages and plant cost of knockdown, mop-up and patrol and includes assistance by other divisions.

Year	Number of Fires	Total Acres Burnt	Ave Size Acres	Total Cost	Average Cost
				$	$
1965-66	9	7.4	0.82	1,432	159
1966-67	7	6.2	0.88	1,103	158
1967-68	9	3.1	0.34	292	32
1968-69	9	1.6	0.18	350	39
1969-70	23	3.1	0.13	422	18
1970-71	45	17.4	0.39	1,238	28

As you can see, in the first two seasons the average sizes and costs remained steady. Then winter burning started to take effect and for the next three seasons the figures speak for themselves.

In the last season things were a bit different. Here the downward trend was upset by a single large fire in February 1971.

Unlike all the others, this one was not under pine canopy. Eleven and a half of its 14.5 acres burnt in an area which was last year felled for the new university, leaving only ten trees per acre and the rest had been totally clear felled earlier. Suppression was difficult because of the wide open access to wind and sun. It was deliberately lit on a six chain front, across wind and this didn't help either. Total suppression costs were $713.00 of which $529.00 was assistance by other Divisions.

The remaining 44 fires of that season altogether burnt only 2.9 acres. This makes their average size 0.07 acres and the average cost $12.00 each.

The jump in the number of fires in the last two seasons is evidently related to increasing population pressures.

Rapidly dwindling areas of other bushland have made the Kardinya Pines a favourite spot for more and more people and all sorts of activities. Horse riders and children are particularly abundant and they also cause most of our fires.

Less common causes have included a signal rocket, two or three burning motor cars and an eager youth who tried to chase a snake by lighting a fire.

In the second table I have tried to show the influence of winter burning on the annual costs of protecting the plantation.

The "acres" column refers to each winter's burning under pines. The "protection costs" column is the total of the costing items of fire prevention, suppression and maintenance of firebreaks. It thus covers all the fieldwork towards fire protection and, of course, includes winter burning. These costs are for wages, plant and materials.

Year	Acres control burnt under pines	Protection costs $
1965	less than 100	6,050
1966	570	5,970
1967	890	4,850
1968	605	2,450
1969	609	3,330
1970	768	2,660

Here again the progressive effects can be seen in the costs, and these have diminished despite wage rises. Between November 1965 and November 1970, a Forest Workman's weekly earnings rose from $40.52 to $54.55 - an increase of 35% - yet costs have dropped from $6,000.00 to around $3,000.00 per year.

Thus, our policy of insurance by burning has cost no extra and has even produced a handsome bonus in savings.

Heavy thinning of pines, however, tends to nullify the benefits of protective burning and therefore our worries are by no means over.

But results so far have been good -- let's keep it that way.