ROTATIONAL CONTROL BURNING MIXED JARRAH-KARRI FOREST AREAS

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INTRODUCTION

The protection of the Forest areas from severe fires by Rotational Control Burning is a well established principle and practice in the Northern Jarrah Forest. In the Southern mixed Karri-Jarrah forests the aircraft makes possible the application of Rotational Control Burning for the first time. At present we are attempting to put into practice rotational control burning by extending techniques that have been proven successful in the Northern Jarrah Forest. The following article will indicate both the similarities and differences in applying these techniques to the mixed forests of the South.

All southern forest burns are carried out by the normal system of securing the perimeter early in the season by edge burning. The area is then stripped out by dropping incendiaries across the wind at predetermined distances so it burns out under controlled conditions. These burns are programmed for the late spring and early summer in much the same manner as the Northern Jarrah burns.

Although these basic steps are similar, the actual fuels, weather conditions and execution of the burns are entirely different. Some of the differences are as follows:

The heavy undergrowth prevents ready access off the tracks for all concerned. This causes major difficulties in locating hop-overs or drop-overs during the burn.

The mixed forest in the majority of burns generally contains jarrah types, flats and karri types. This requires three different burning conditions and so each area is commonly flown three times to take out the flat types, jarrah types and finally, if weather permits, the karri types. This treating of the area for three different burns also requires at least two and generally three edging burns to get an edge. The time lag between the jarrah and karri burns is commonly between two and four weeks. This combined with the more prolonged wet spring weather as compared with the Northern Jarrah, leads to the major difficulty that in some years the karri forest does not dry out to permit control burning before the close of the karri burning extension, usually 15th January.

When this happens we have the highly dangerous condition of

heavy karri fuels adjacent to recently burnt jarrah fuels with burning logs etc. all through the prohibited burning season. These areas could have weak edges because of the late drying of the karri along the edges.

There is always a distinct possibility of having an extremely rapid fire danger build up between the jarrah and karri burns in December and early January.

Because of the problems of unsuitable weather, lack of access and extensive areas of forest, there has been a far greater build-up in fuel in the Southern Forest areas as compared with areas further north. This in turn has increased the difficulty of the aircraft burning because the burning is adjacent to heavy fuels which ignite easily and prove difficult to control. Although the air crew is becoming highly skilled, it is generally an exception if the occasional stray incendiary does not drop into adjacent country.

There appears to be a major difference in the drying characteristics of karri fuels and jarrah fuels in that the heavier the jarrah fuel becomes, the milder the conditions required and the earlier in spring the burn can be carried out. (In discussion with some of the Foresters who carried out the initial burning in the compartments around Gleneagle and Dwellingup, they mentioned that a lot of the initial burning was done in the dry spells in winter in June, July and August). It appears that regardless of how heavy the karri fuels get this does not permit burning earlier in the spring. The indications at the moment suggest that the heavier the fuel the longer it takes to dry out and so the later in spring or summer it can be burnt.

Because of the troubles encountered, it has been necessary to plan aircraft burns like a fairly large fire with a full complement of Fire boss, Sector bosses, gangs and bulldozers. In the past it has commonly been necessary to shift gangs from outside the Divisions because the gang strength in one Division is insufficient to maintain adequate patrol and control around the perimeter.

CONCLUSION

I have no doubt that further basic data regarding burning in the area will greatly assist in both the ease and safety of carrying out these burns; but at present, it is not correct to regard the Southern burning as directly comparable with the Northern Jarrah burning because of the advent of the aircraft burning technique.