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SILVICULTURE SPECIFICATION 2/87

JARRAH SILVICULTURE IN THE PRESENCE OF *Phytophthora cinnamomi*

The silvicultural objectives and system described in "Treemarking and Silviculture in the Jarrah Forest" (1987) and Specification 1/87, are not appropriate in forest affected by jarrah dieback.

This specification is applicable to those jarrah forest areas infected by *P.cinnamomi* that are to be logged and which are relatively small in area.

These stands, regardless of their structure, should be treated with conservative optimism with the objective of:

- Minimising the impact of logging on the site and the possible escalation of disease impact.
- By retaining crop trees, maintain the productive potential of the forest should the disease remain at a relatively low impact.
- Maintaining a forest ecosystem of resistant species should the disease escalate to a very high impact.

Where logging is to take place in areas affected by *P.cinnamomi* the current impact of the disease on the stand structure and health should be assessed and categorised as either:

1. **Low to Moderate Impact** defined as "Some susceptible plants in the understorey killed by *P.cinnamomi*" up to "Many susceptible plants in the understorey killed by *P.cinnamomi* with less than 10 per cent of the overstorey dead or dying". (Definitions are those used on Dieback Impact Maps).

Or

2. **High and Very High Impact** defined as "most susceptible plants in the understorey killed by *P.cinnamomi* with greater than 10 per cent of the overstorey dead or dying". (Definitions are those used on Dieback Impact Maps).

The silvicultural guidelines for the tree marking and treatment of each assessed impact category are:

1. **LOW TO MODERATE IMPACT SITE**
(Regardless of forest structures)

- 1.1 Mark for retention (and protection) all stems of dieback tolerant species, eg, marri and blackbutt.

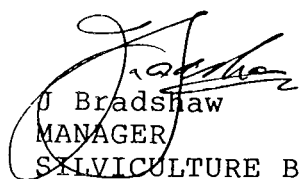
- 1.2 In addition, mark for retention (and protection) approximately 10 sq.m/ha of crop trees. This 10 sq.m/ha will include those stems of dieback tolerant species of crop tree standard.
- 1.3 Where the total basal area retained would be less than 15 sq.m/ha, retain non crop trees to ensure a minimum forest density of 15 sq.m/ha.
- 1.4 Harvest all marketable produce from trees not marked for retention. Marked trees to be protected from falling and snagging damage.
- 1.5 Carry out tops disposal burning of the logging slash (preferably a spring burn).
- 1.6 No other post logging silvicultural treatment is justified until the progression of the disease is more clearly exhibited.

2. HIGH AND VERY HIGH IMPACT SITE

- 2.1 Mark for retention (and protection) all stems of dieback tolerant species (eg, marri, blackbutt), as well as other non-marketable small jarrah crop trees that otherwise may be damaged in falling and snagging operations.
- 2.2 Harvest all marketable produce from trees not marked for retention (and protection). Marked trees to be protected from falling and snagging damage.
- 2.3 Carry out:
 - Tops disposal burning after 1 summers drying of the logging slash.
 - Assess adequacy of dieback tolerant regeneration where less than 10 sq.m/ha of forest cover remains. If insufficient, (less than 1,000 spha) infill with seed or plantings of indigenous dieback tolerant species. Consideration may also be given to spot fertilising up to 1,000 lignotubers/ha of resistant species.
- 2.4 Protect from fire until regeneration can withstand a prescribed fuel reduction burn.
- 2.5 No other post logging silvicultural treatment is justified; however, where large bare areas (no vegetation cover) occur, these may be seeded with local scrub species. This is to help thwart the development of invader species such as *Dryandra sessilis* which under normal circumstances will colonise bare, open patches very quickly to the exclusion of the tree and other scrub species regeneration.

In the case of large areas of dieback it may be desirable to rehabilitate with exotic species. In this case it should be done as part of an overall rehabilitation program.

NB: Crop trees are defined in "Treemarking and Silviculture in the Jarrah Forest" (1987) and refer particularly to jarrah.


J Bradshaw
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