ROADSIDE SCRUB CONTROL

by

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Further to a letter received from the D/F. Pemberton, the following notes may also help other if circulated through Forest Notes.

Information of value in practice obtained in the initial experiments show:

1. Economic control with chemicals is obtained best during the first dry season following burning and regeneration of the weeds.
2. 2, 4, 5-T Ester at $2\frac{1}{2}$ lbs/acre ($2\frac{1}{2}$ pints, 80% concentrate) controls the main fireweeds, Acacia and Bossiaea sp.
3. Thorough wetting of foliage is important:
   - 3.1 The best dilutant is water, and the addition of the wetting agent Superior Summer White Oil or Plus 50 is essential at 1:80 (2 oz/gal.).
   - 3.2 The mixture is applied at the rate of performance of the machine. This is measured:-

$$\text{Gals/ac.} = \frac{43560 \times \text{gallons used}}{\text{area sprayed (length x width)}}$$

$$\text{Gals/min.} = \frac{\text{gals/ac x strip width (feet)}}{\text{speed m.p.hr.}} \times \frac{\text{speed m.p.hr.}}{495}$$

   - 3.3 One acre is covered by a strip eight feet wide by one mile long.
4. Eradication is not practicable, and control of scrub requires follow-up treatments:
   - 4.1 In rotational burnt areas, reburning and respraying, until the composition of the weeds at the roadsides has been changed, mainly to monocots and herbaceous dicots.
   - 4.2 In regeneration areas, two runs in opposite directions (between one and two times faster than speed of application in one direction) is recommended for most reliable control of weeds, rather than spraying from one direction only.
   - 4.3 Slasher control of scattered large woody scrub where necessary, supplements chemical control methods.
5. Important factors in costs are machine and operator efficiency. - Low volume mist spraying is feasible at a reliable minimum of about 10 gals/acre at

present, with total costs at less than $1 per gal in the supply of the materials and the application of the mixture.

6. Motorised misting of the foliage of the above fireweeds (**), indicate reliable performance (*), at 2% or 2½% 2, 4, 5-T, operating:
   6.1 Solomister at 10 gals per acre (or per mile (*) per hour) with 5 refills of the 2 gal. tank each (half pint of 2, 4, 5-T of 80% concentrate, and 4 oz. white oil) misting at 1½ feet per second along the roadside. Add refilling time; and alternate operators when refilling to remove fatigue.
   6.2. Omnimist tank of 200 gals (with 5 gals of 2, 4, 5-T of 80% concentrate and 2½ gals of white oil) misting to the limit of 5 m. p. h. along the roadside covers 6 miles per tankful or 9 acres of 12 foot strip (*). Add refilling time.

Note - (*) 1. Effective width of control is half the distance of penetration of misting.
2. The hormone is volatile, must be directed downwards to the roadside edge, and applied on calm days or in light air movement less than 5 m. p. hr; and not within two hours of rain.

(**) For control of resistant broad leaved species, (hazels and eucalypts) the concentration of the 2, 4, 5-T needs to be increased up to 4% pending improvements in efficiency.

Control by hand methods only by slashing, cost $20 per mile/acre, four feet wide on both sides of the treated roads in 1959-60. Without increasing cost over ten years, $20 of chemical spraying from 1970, may be expected to provide from 2 or 3 times the width of the treated roadside, in strips from 8 to 12 feet wide: these strips will last longer and require less frequent retreatment than slashing only.

Most important is the safety and protection, provided in maintaining clear vision for travelling along the forest roads.