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RESEARCH NOTES

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CAN WE SAVE THE SEED CROP?

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A news note has just announced a good seed crop this year for Douglas-fir and its associates. Foresters are asking: Can the crop be saved for natural regeneration or must much of it be destroyed by slash burning?

Some slash burning is necessary for adequate fire protection in Northwest forests; this is a well recognized policy. Also, burning sometimes improves conditions for natural regeneration in areas with heavy debris or dense brush.

However, there are instances where slash burning prevents, or at least delays, the rate of restocking and such will be the case this autumn on many areas where a slash burn destroys the current year's seed fall.

Records of Douglas-fir seed production show only 7 heavy and 9 medium crops during the past 40 years, and as many as 5 light crops have occurred in succession. After two years of almost complete seed crop failure, this year has an above-average crop. Foresters and timberland managers should take advantage of it both by laying in a supply of seed and by doing everything possible to protect the seed falling on cut-over land.

Slash burning, carefully planned and executed, (a) reduces the fire hazard, (b) retards brush and weed development, and (c) facilitates planting where natural regeneration fails. Thus, clean-up burning during the

past few years of poor seed crops should have provided excellent seedbed conditions for the current year's seed fall.

Nevertheless, unless required to reduce an extreme fire hazard, slash burning may not be wise this year on some areas. Seed fall starts in late August; seed trap records show that under average conditions more than half normally falls in September, and two-thirds is on the ground before the end of October. Not only will late burning consume most seed, but it will also leave the area in a bare and blackened condition that will make seedling survival difficult next year.

Detailed studies are under way that will give more positive answers to many puzzling problems in slash burning and Douglas-fir regeneration. In the meantime, to take advantage of the current year's seed crop and hasten the restocking of recent cutovers, the following procedure is suggested:

(a) Where burning should be done, do it as early in the season as it can be done safely.

(b) Try to do this burning after the first heavy rains when the fine slash is dry but the duff is still wet below the surface; this protects the humus covering. An article by Aufderheide and Morris, "Broadcast Slash Burning After a Rain" in the September 1948 West Coast Lumberman, will serve as a good guide.

(c) Burn only the areas where slash disposal is necessary for reasonable fire protection or areas where brush development or debris is so heavy as to hinder natural regeneration.

(d) Provide clean-up of roadsides, spot burning of hazard areas, and extra protection for areas not broadcast burned.

(e) Unless necessary to reduce an extreme slash hazard, do not broadcast burn areas of light and medium slash, particularly the southerly exposures, if there is a seed crop on the timber being cut or on surrounding timber.

As light seed years follow, take advantage of them by burning non-stocked, bad slash areas thereby reducing the fire hazard, rodent population, and brush and weed competition.