RECOVERY OF LOGGING RESIDUE

USING A TRACTOR MOUNTED SKIDDING WINCH

A Thesis

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By

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Abstract

A farm tractor with the addition of a skidding winch can be a useful piece of machinery for the nonindustrial private forest landowner. This study looks at the feasibility, productivity costs of using this type of equipment in five different applications:

1. Slash pile recovery of logging residue
2. In-woods recovery of logging residue
3. Precommercial thinning residue recovery
4. Sawlog recovery
5. Hazard reduction of precommercial thinning.

The utilization of residue left over from previous logging operations for firewood presents an additional source of income for a landowner with small forest acreages. Treatments one and two looked at this system's effectiveness in recovering this residue. Recovery from a slash pile had double the overall rate of production (0.78 cords per hour) as did recovery of in-woods residue (0.38 cords per hour).

With rising stumpage prices the use of precommercial thinnings is becoming more economically justifiable. Applications three and five looked at using a tractor mounted skidding winch in conjunction with this type of silvicultural treatment. In application three the residue was skidded to a roadside where it could be utilized for posts or firewood. Overall production was 0.89 cords per hour. In application five the residue was skidded into burn piles throughout the stand as a way of reducing the potential for a fire and complying with state fire hazard requirements.

Another result of high stumpage prices will be an increase in sanitation and salvage type harvests. This system has a relatively cheap mobilization and operating cost especially when compared to conventional logging equipment. It could be a viable alternative to certain roadside harvest and salvage operations. Overall productivity was 685 board feet per hour with a two man crew.

Some requirements of this system are good access roads or well built skid trails, a stable and relatively level landing area, and careful planning before cutting. The system proved to be both reliable and easy to operate. The proper use of fallblocks increased production by avoiding potential hang-ups before they occurred.

Study Site

The study sites were located on the East Hatter Creek, West Hatter Creek and Flat Creek Units of the University of Idaho Experimental Forest. The actual recovery work was done by two members of the student logging crew.

Location of Complete Research:

Author & Title: Biltonen, Thomas
Recovery of Logging Residue Using a Tractor Mounted Skidding Winch

University of Idaho Library:

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College of Natural Resources:

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Other Sources: