

FACTORS TO CONSIDER IN SMALL EQUIPMENT FOR HARVESTING SMALL TIMBER

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Small-scale equipment may offer a means to continue to harvest trees less than 12 inches in diameter while reducing the site impacts caused by conventional large-scale harvesting equipment. Very little research has been conducted to date in the western U.S. on these labor intensive harvesting methods. Small-scale equipment discussed are the all-terrain vehicles with attachments, tracked mini-skidders, and systems based on the modified agricultural tractor including tractor winches, processors and forwarders. Site impacts and concerns include the extent and severity of soil compaction, displacement and erosion as well as subsequent degradation of water quality. Stand impacts are measured in terms of damage to residual stems while accomplishing the silvicultural treatment objective. This paper discusses the relationship of a variety of small-scale equipment and the commensurate harvesting system to the factors of labor and productivity, timber size, terrain, soil conditions, season of year and to the silvicultural prescription including slash disposal issues.

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