

The damage to remaining trees and the disturbance of the forest floor after ordinary and line thinning using a small harvester and forwarder in Japan

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Logging operations involving the use of wheel-type forestry machines achieve high productivity in comparison with skyline. Such compact wheel-type forestry machines (harvester: SAMPO SR1046Pro, forwarder: VIMEK 608) are advantageous in sharp turn works due to their articulate structure. However, there is concern that the disturbance of the forest floor may be exacerbated by operating these units instead of cable logging systems. Since their penetration is not yet widespread in Japan, we researched the impact of these works on remaining trees and the forest floor. Damage to many stems of remaining trees occurred during bucking by the harvester. The road was scooped out due to repeated runs of the forwarder, and the bark of the roots was peeled off by the wheels, especially line thinning. We think the road need not be run over repeatedly and covered by branches.