

CAN OVERLAPPING ROTATIONS REALLY INCREASE PRODUCTIVITY?

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ABSTRACT.—Overlapping rotations by means of advanced regeneration has been suggested as a way to maintain continuous forest cover while at the same time increasing productivity. However, emphasizing regeneration before rather than after harvest, may have some tradeoffs. We investigated the impact on productivity for three stands in which white pine seedlings were underplanted. A 40-year-old jack pine plantation, 100-year-old red pine stand, an uneven-aged northern hardwood stand were thinned to basal areas of (0 to 36 m² ha, 8 to 48 m² ha⁻¹ basal area, and 6 to 36 m² ha⁻¹, respectively). After 3-0 white pine seedlings were underplanted under dense, medium density, and open conditions. Three different levels of weed control were applied. We followed growth of the underplanted seedlings for two growing seasons and projected the growth of the residual overstory using TWIGS. Tradeoffs between managing for maximizing overstory productivity or growth of advanced regeneration are discussed.

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