



SECTION 3: FOREST FERTILIZATION IN SILVICULTURE AND MANAGEMENT DECISIONS

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Managers face a common dilemma on what strategy to employ in managing forests into the future. Because of the wide variation in biological and economic responses to fertilization, soil testing and plant analysis data are being used in the decision-making process. The influence of site and stand variables will play a key role in identifying appropriate strategies to meet product demands in the years ahead.

Silvicultural management decisions related to forest fertilization can have a significant impact in such areas as wood quality and tree value. The accepted standards used to determine wood quality—specific gravity, knot size, ring width, fiber length, fibril angle, and treatability—have been largely ignored in traditional silvicultural analyses. The potential impact of fertilization on the quality of such forest products as structural lumber, structural veneer, composites, poles, pulp and paper, and clear wood is speculative at best. Models and analytical tools are currently being developed to help evaluate fertilization as a management option, but research is needed now to improve understanding so managers can better address this issue in the future.

Part of the overall management strategy must be to incorporate nutritional considerations at the time of large-scale forest planning, using the best tools available. Forest-level decisions must be made in light of interactions with other forest uses and values. The U.S. Forest Service is utilizing models such as FORPLAN and DP DFSIM to help manage our national forests to meet an ever-increasing demand for forest products from a dwindling land base.