SILVAH 5.1: DEVELOPING INTERIM GUIDELINES FOR MANAGING OAK IN PENNSYLVANIA THROUGH MULTI-AGENCY COOPERATION

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The SILVAH decision-support system developed by numerous researchers at the Forestry Sciences Lab in Irvine, PA, has a proven track record for prescribing appropriate silvicultural treatments for the cherry-maple and northern hardwood forests of the Allegheny Plateau region. However, it has had only limited usage in mixed-oak forests of the same region and virtually no usage in the mixed-oak forests of neighboring regions (Ridge and Valley, Blue Ridge Mountains, etc.) of Pennsylvania because it is not perceived to be applicable to these regions. In late 1999, the Northeastern Research Station, Pennsylvania Bureau of Forestry, Pennsylvania State University, Allegheny National Forest, and the private sector began a cooperative effort to make SILVAH more applicable and widely used.

Experienced oak foresters and researchers from these agencies initially met to review existing oak knowledge and place it within the SILVAH prescription framework. Four major hurdles were encountered:

1) how to evaluate the competitive ability of existing oak regeneration,
2) what constituted a plot stocked with adequate oak regeneration,
3) how to sequence appropriate silvicultural treatments to address the most likely management scenarios, and
4) how to account for wide differences in site conditions within Pennsylvania.

Oak regeneration guidelines developed in the Midwest and the Appalachians and the participant's field experience were combined to overcome each of the hurdles and to create interim guidelines.

At the beginning of the 2000 field season, Northeastern Research Station scientists conducted a series of 2-day training sessions for Bureau of Forestry personnel to explain the changes in the inventory and computer-entry procedures. These field foresters then tested the draft interim guidelines during the remainder of the year. Several minor problems were discovered, but overall the new SILVAH procedures worked well. A follow-up meeting of the original partners and the field foresters revised the draft interim guidelines by incorporating their findings and concerns into final interim oak management guidelines for Pennsylvania. These guidelines are now being programmed into SILVAH 5.1 and will be published as a Forest Service General Technical Report.

This cooperative multi-agency approach of combining existing guidelines with extensive field experience led to creation of usable guidelines in a short period of time relative to use of a research-only approach. It also identified critical knowledge gaps that have been prioritized and are being actively studied so future versions of SILVAH for oak will be based as solidly in research as the current version of SILVAH for cherry-maple and northern hardwood forests.

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