

**FOUR DECADES OF COOPERATIVE FORESTRY RESEARCH AT  
THE UNIVERSITY OF MAINE  
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Maine's large forest land owners have long recognized the need to support a strong research effort as part of their managing Maine's forests. In 1975, a small group of visionary forest industry leaders and representatives of the University of Maine formed the Cooperative Forestry Research Unit (CFRU). It is now one of the oldest industry/university forest research cooperatives in the United States, and continues to serve as a model of joint leadership and cooperation between Maine's largest industry and the University of Maine.

The CFRU is composed of about 27 private and public forest land management organizations from across the state that guide and support research on key forest management issues facing Maine's forest landowners and managers ([www.umaine.edu/cfru/](http://www.umaine.edu/cfru/)). The mission of the CFRU is to "*conduct applied scientific research that contributes to the sustainable management of Maine's forests for desired products, services, and conditions.*" The CFRU has been generously supported for 28 years through the voluntary financial and in-kind contributions of its members.

During that time, the CFRU has researched and solved a number of crucial issues facing Maine's forest managers. In recent years, the CFRU also has become the primary research and development effort supporting third-party forest certification in the state. CFRU research has had two primary objectives: 1) develop information and tools to improve the efficiency and productivity of forest management and 2) provide science-based information about the ecological effects of forestry practices.

Research focusing on the ecological effects of forestry practices has allowed the CFRU to provide scientific information that has been instrumental in helping the forest industry meet the requirements of certification by the Sustainable Forestry Initiative and Forest Stewardship Council. In addition, this research has provided key information for policy makers addressing a number of important forestry issues in Maine and elsewhere. Key CFRU accomplishments include:

1. Identifying the habitat requirements for American marten and increasing our understanding about how forest fragmentation influences this important habitat
2. Documenting the effect that herbicides have on the habitat of moose and other mammals
3. Documenting the influence that whole-tree harvesting has on nutrient losses from forest sites (The Weymouth Point study)
4. Conducting critical analyses of the state's wood supply that have influenced management decisions and financial investments in the Maine woods
5. Introducing a variety of new vegetation management methods and tools that have increased reforestation success on harvested lands
6. Introducing a site classification system for spruce-fir (Briggs system) and hardwood sites that have improved land stratification and silviculture across the state
7. Providing key recommendations for managing stands that were damaged by the spruce budworm during the 1970s and 80s
8. Documenting that nitrogen fertilizer does not increase the growth of spruce-fir stands unless they have been previously thinned
9. Quantifying how silvicultural practices influence wood quality in future forest stands

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10. Providing insight into how to better manage beech bark disease
11. Demonstrated that the application of wood ash and paper mill sludge to the forest does not increase forest growth

Current CFRU research continues this tradition with a focus on improving silviculture in the Maine forest (commercial thinning, hardwood management, yield gains from young stand management, growth and yield, wood supply) and improving our understanding about the influence of forest management on wildlife habitat (PCT influences on hare, lynx habitat preferences, marten habitat supply) and conservation of biodiversity (patch retention, buffer strips and aquatic protection, biodiversity indices).

In addition to the above research accomplishments, and perhaps even more importantly, CFRU-sponsored research on The University of Maine campus has provided scores of undergraduate students, graduate students, and faculty in forestry and wildlife with the opportunity to learn about and help solve some of the most important problems facing forest managers in the state. This investment has provided a wealth of expertise that has been drawn upon by forestry organizations, government agencies, and the public when information and advice was needed about key sustainable forestry issues. The CFRU has had a positive and lasting influence on the forestry culture at The University of Maine by providing a direct link between the university and the people managing Maine's forest land. As a result, the CFRU has been identified as one of top six accomplishments being celebrated during the 100th anniversary of forestry program at the University of Maine (2003-2007).