

CURRICULUM VITAE

***ROBERT G. WAGNER***

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CURRICULUM VITAE  
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EDUCATION:

- Ph.D. 1989 Silviculture/Vegetation Management, Department of Forest Science, Oregon State University, Corvallis, OR.  
Dissertation: Interspecific competition in young Douglas-fir plantations of the western Oregon Coast Range  
Advisor: Dr. Steven R. Radosevich
- M.S. 1980 Forest Ecology/Silviculture, College of Forest Resources, University of Washington, Seattle, WA.  
Thesis: Natural regeneration at the edge of an *Abies amabilis* Zone clearcut on the west slope of the central Washington Cascades  
Advisor: Dr. David R. M. Scott
- B.S. 1977 Forest Management, College of Natural Resources, Utah State University, Logan, UT.
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FIELDS OF SPECIALIZATION:

Silviculture, forest regeneration, vegetation management, forest ecology, forest modeling

**PROFESSIONAL EXPERIENCE:**

2010 – Present     Director, Center for Research on Sustainable Forests, University of Maine, Orono, Maine.

The Center for Research on Sustainable Forests (CRSF) initiates and conducts research on commercial forests, family forests, and conservation lands & public values. Four programs within the CRSF coordinate research in these areas. The Cooperative Forestry Research Unit (CFRU) is a long-standing research cooperative that coordinates research on northern Maine’s commercial forest. A Family Forests program is coordinating research on forest resource issues affecting nearly 6 million acres of small private forests owned by over 120,000 small woodland owners in southern and eastern Maine. A Conservation Lands & Public Values research program is coordinating research on issues affecting about 4 million acres of conservation forestlands, as well as on public attitudes about forest management. A Nature-based Tourism research program was added in 2014 to conduct leading collaborative research, education, and outreach on sustainable tourism in Maine. As Director of the center, I also manage Theme 3 (Forest Productivity and Forest Products) of the Northeastern States Research Cooperative (NSRC) – a USDA competitive grant program that supports cross-disciplinary, collaborative research in the Northern Forest.

2004 – Present     Henry W. Saunders Distinguished Professor in Forestry, School of Forest Resources

The Henry W. Saunders Distinguished Professorship was created to “encourage highly qualified educators for teaching students in forestry” and to “advance knowledge by developing research of the hardwood species.” The Saunders Chair also includes providing leadership in helping UMaine “establish and maintain itself as an outstanding world class forestry institution.” My teaching responsibilities include Research Methods (SFR 521), Forest Regeneration (SFR 410), and Introduction to Forest Resources Professions (SFR 103) courses, and serving as advisor to graduate students.

1999 – Present     Director, Cooperative Forestry Research Unit, University of Maine, Orono, Maine.

As Director of the Cooperative Forest Research Unit (CFRU), I manage a research cooperative representing more than 30 forestland owners that own or manage 8.3 million acres of forestland in Maine (half of the state’s total forestland). I have brought together diverse organizations including industrial forestland owners, large family forest owners, TIMOs, REITs, conservation organizations, pulp mills, energy companies, and government agencies to collaborate on research addressing common forest resource problems. The mission of the CFRU is to conduct applied research that contributes to the sustainable management of Maine’s forests, and includes research focused on silviculture, forest modeling, wildlife habitat, biodiversity, and riparian zone management. As Director of CFRU, I also serve as Maine’s Site Director for the Center for Advanced Forestry Systems (CAFS), a NSF I/UCRC program that includes a national consortium of industry/university research cooperatives. As a scientist in the CFRU, my research includes research

focuses on commercial thinning, improving quality of hardwood regeneration, long-term dynamics of spruce-fir stands following herbicide and PCT treatments, modeling Maine's long-term wood supply, and vegetation management in Northeastern forests.

- 2008 – 2013      Director, School of Forest Resources, University of Maine, Orono.
- As Director of the School, I led faculty and staff in delivery of the university's Land Grant mission in forest resources education, research, and service. The School includes 20 faculty, 150 undergraduates, 60 graduate students, and 8 staff. These duties included overseeing 13,000 acres of university forest properties near campus and across the state. Major accomplishments during my term included: major revision of the school's curricula; hiring of five new tenure-track faculty members in a difficult fiscal environment (two from new external endowments); successful SAF accreditation of all SFR majors and SWST accreditation of one new major; major renovation of Nutting Hall; building of the new Barbara Wheatland Geospatial Laboratory from a private endowment, and a significant increase to the school's \$16 million in endowment funds (which is the largest of any department in the 7 campus UMaine System).
- 2006 – 2013      Associate Director, Forest Bioproducts Research Institute (FBRI).
- As a Co-PI of the NSF research team that received a \$6.9 million award from the National Science Foundation's Experimental Program to Stimulate Competitive Research (EPSCoR) and a \$3.5 million match by the Maine Economic Improvement Fund, I helped develop FBRI. The goal of FBRI is to advance understanding about the scientific underpinnings, system behavior, and policy implications for the production of forest-based bioproducts that meet societal needs for materials, chemicals and fuels in an economically and ecologically sustainable manner. As Associate Director I was responsible for leading FBRI research on understanding the wood supply implications, ecological impacts, social acceptability, and economic viability of emerging forest bioenergy and bioproducts markets in the state of Maine.
- 2003 – 2008      Professor of Silviculture, School of Forest Resources, University of Maine, Orono, & Cooperating Scientist, U.S. Forest Service, Northern Research Station.
- As a faculty member in the School of Forest Resources, I coordinated the Acadian Forest Ecosystem Research Program (AFERP) located on the Penobscot Experimental Forest. AFERP is a long-term, multi-disciplinary, cooperative research effort examining the ecological effects of expanding-gap silvicultural systems in the Acadian forest. My research AFERP research projects involved vegetation succession and downed woody debris dynamics following gap harvesting, and developing new methods for quantifying stand structural complexity. Forty percent of my appointment included serving as a Cooperating Scientist with the U.S. Forest Service, Northern Research Station from 1998-2008.
- 1998 – 2003      Associate Professor, Department of Forest Ecosystem Science, and Director, Cooperative Forestry Research Unit, University of Maine, Orono.
- 1991 – 1998      Program Leader & Senior Scientist, Ontario Forest Research Institute,

Ontario Ministry of Natural Resources, Sault Ste. Marie, Ontario, Canada.

I developed and led the Vegetation Management Alternatives Program (VMAP) that was funded from an Ontario Cabinet Submission for a 5-year \$15 million appropriation. This comprehensive program included applied and fundamental research, professional and public education, and field delivery. The program advanced all aspects of forest vegetation management in Ontario, changing the way forest managers view and practice forest vegetation management.

Accomplishments from 1991-96 included successfully developing and investigating a wide variety of vegetation management alternatives, advancing knowledge about the ecological effects of vegetation management practices, producing over 300 technical publications (more than 80 of which are in peer-reviewed journals), and providing continuing education opportunities for hundreds of forest managers and technicians.

As program leader, I managed 15-20 scientists and technicians in the institute and in four regional science and technology units at other locations. As part of the program, I also initiated and am managed a multi-million dollar trust fund for competitive research proposals with university, federal, and private research organizations across Canada.

As a principal investigator, my research emphasized work in the area of plant interference, vegetation dynamics and succession, vegetation management alternatives, ecophysiology, and the ecological effects of silvicultural activities. I have been co-investigator of projects involving forest modeling, expert systems, effects of vegetation management on small mammal populations, and a study of public attitudes and perceptions about forestry issues. As an adjunct professor at several Ontario universities, I supervised graduate student projects on mechanisms of interspecific competition.

1991 - 1992      Unit Leader, Scientist and Stand Dynamics/Silviculture Unit, Ontario Forest Research Institute, Ministry of Natural Resources, Sault Ste. Marie, Ontario, Canada.

Provided leadership and supervision for seven scientists and six technicians conducting research in stand dynamics and general silviculture for the institute. The unit was dedicated to research in the areas of tolerant hardwood silviculture, boreal mixedwood stand dynamics and ecology, and forest vegetation management. Development of the VMAP (above) and ministry re-organization shifted my responsibilities to full-time leadership of that program.

1990 - 1991      Provincial Vegetation Management Specialist, Forest Health and Protection Section, Ministry of Natural Resources, Sault Ste. Marie, Ontario, Canada.

Provided leadership, technical recommendations, and forest policy development for all aspects of forest vegetation management on crown forestlands managed by the Ontario Ministry of Natural Resources (40 million hectares). Included supervision of several technical staff responsible for the weed control program in 10 provincial nurseries and herbicide-use assessment.

1986 - 1989      Assistant Director, CRAFTS (Coordinated Research on Alternative Forestry Treatments and Systems in vegetation management) Cooperative,

Department of Forest Science, College of Forestry, Oregon State University, Corvallis.

Assisted Director in leading a university-based research cooperative involving 20 industrial and government forestry organizations. Primary responsibilities included initiating and coordinating a wide range of research projects focusing on plant ecology, vegetation management, modeling, and other silvicultural aspects of forest regeneration in the Pacific Northwest.

- 1981 - 1986 Faculty Research Assistant, CRAFTS Cooperative (acting Cooperative Director from 10/82 to 8/83).  
Project coordinator and research technician for coop studies on alternative vegetation management practices.
- 1980 - 1981 Tree Planting Crew Supervisor, Pope & Talbot Co., Port Gamble, WA.
- 1980 Graduate Research Assistant, College of Forest Resources, University of Washington, Seattle. Biomass of coniferous understory trees in Crater Lake National Park, Oregon.
- 1979 - 1980 Graduate Teaching Assistant, University of Washington-USDA Forest Service. Region 6 Silviculture Institute, basic sciences and silvicultural prescriptions modules
- 1978 - 1979 Graduate Teaching Assistant, University of Washington, College of Forest Resources. undergraduate forest ecology (4 quarters)
- 1976 - 1977 Research Technician, Utah State University, Logan. Biomass of conifers in a high-elevation spruce-fir forest.

## PUBLICATIONS:

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### *Refereed Journal Articles:*

(Total = 80)

*(underlined authors are graduate students or post-doctoral fellows for which I was advisor)*

Nelson, A.S., **R.G. Wagner**, M.E. Day, A.R. Weiskittel, and M.R. Saunders. 2015. Effects of species composition, management intensity, and shade tolerance on vertical distribution of leaf area index in juvenile stands in Maine, USA. *European Journal of Forest Research* 134 (2): 281-291.

Nelson, A.S., and **R.G. Wagner**. 2014. Spatial coexistence of American beech and sugar maple regeneration in post-harvest northern hardwood forests. *Annals of Forest Science* 71: 781-789.

Nelson, A.S., Weiskittel, A.R., Wagner, R.G., and Saunders, M.R. 2014. Development and evaluation of aboveground small tree biomass models for naturally regenerated and planted species in eastern Maine, U.S.A. *Biomass and Bioenergy* 68: 215-227.

- Rice, B., A.R. Weiskittel, and **R.G. Wagner**. 2014. Efficiency of alternative forest inventory methods in partially harvested stands. *European Journal of Forest Research* 133(2): 261-272.
- Nelson, A.S., A.R. Weiskittel, and **R.G. Wagner**. 2014. Development of branch, crown, and vertical distribution leaf area models for contrasting hardwood species in Maine, USA. *Trees* 28(1): 17-30.
- Olson, M.G., S.R. Meyer, **R.G. Wagner**, and R.S. Seymour. 2014. Commercial thinning stimulates natural regeneration in spruce–fir stands. *Canadian Journal of Forest Research*. 44(3): 173-181.
- Bataineh, M.M., **R.G. Wagner**, M.G. Olson, E.K. Olson. 2013. Midrotation response of ground vegetation to herbicide and precommercial thinning in the Acadian Forest of Maine, USA. *Forest Ecology & Management* 313: 132–143.
- Bataineh, M.M., L. Kenefic, A.R. Weiskittel, **R.G. Wagner**, and J. Brissette. 2013. Influence of partial harvesting and site factors on the abundance and composition of natural regeneration in the Acadian Forest of Maine, USA. *Forest Ecology & Management* 306: 96–106.
- Bataineh, M.M., **R.G. Wagner**, A.R. Weiskittel. 2013. Long-term response of spruce-fir stands to herbicide and precommercial thinning: Observed and projected growth, yield, and financial returns in central Maine, USA. *Canadian Journal of Forest Research* 43(4): 385-395.
- Nelson, A.S., **R.G. Wagner**, M.R. Saunders, and A.R. Weiskittel. 2013. Influence of management intensity on the productivity of young early successional Acadian stands in eastern Maine. *Forestry* 86 (1): 79-89.
- Nelson, A.S., M.R. Saunders, **R.G. Wagner**, and A.R. Weiskittel. 2013. Early stand production of hybrid poplar and white spruce in mixed and monospecific plantations in eastern Maine. *New Forests* 43(4): 519-534.
- Olson, M.G. and **R.G. Wagner**. 2012. Forty years of spruce-fir stand development following herbicide application and precommercial thinning in northern Maine, USA. *Canadian Journal of Forest Research* 42:(1) 1-11.
- Hennigar, C.R., J.S. Wilson, D.A. MacLean, and **R.G. Wagner**. 2011. Applying a spruce budworm decision support system to Maine: Projecting spruce-fir volume impacts under alternative management and outbreak scenarios. *Journal of Forestry* 9: 332-342.
- Nelson, A.S., and **R.G. Wagner**. 2011. Improving the composition of beech-dominated northern hardwood understories in northern Maine. *Northern Journal of Applied Forestry* 28(4): 186-193.
- Briedis, J.I., J.S. Wilson, J.G. Benjamin, and **R.G. Wagner**. 2011. Logging residue volumes and characteristics following integrated roundwood and energy-wood whole-tree harvesting in central Maine. *Northern Journal of Applied Forestry* 28(2): 66-71.
- Arseneault, J.E., M.R. Saunders, R.S. Seymour, and **R.G. Wagner**. 2011. First decadal response to treatment in a disturbance-based silviculture experiment in Maine. *Forest Ecology and Management* 262 (3): 404-412.



- Saunders, M.R., S. Fraver, and **R.G. Wagner**. 2011. Nutrient concentration of down woody debris in mixedwood forests in central Maine, USA. *Silva Fennica* 45(2): 197–210.
- Hoepting, M.K., **R.G. Wagner**, J. McLaughlin, and D.G. Pitt. 2011. Timing and duration of herbaceous vegetation control in northern conifer plantations: 15th-year tree growth and soil nutrient effects. *Forestry Chronicle* 87(3): 398-413.
- Briedis, J.I., J.S. Wilson, J.G. Benjamin, and **R.G. Wagner**. 2011. Biomass retention following whole-tree, energy wood harvests in central Maine: Adherence to five state guidelines. *Biomass and Bioenergy* 35: 3551-3559.
- Olson, M.G. and **R.G. Wagner**. 2011. Factors affecting species richness of tree regeneration in mixedwood stands of central Maine. *Journal of Vegetation Science* 22(2): 300-311.
- Olson, M.G. and **R.G. Wagner**. 2010. Long-term compositional dynamics of Acadian mixedwood stands under different silvicultural regimes. *Canadian Journal of Forest Research* 40: 1993-2002.
- Amos-Binks, L.J., D.A. MacLean, J.S. Wilson, and **R.G. Wagner**. 2010. Temporal changes in species composition of mixedwood stands in northwest New Brunswick: 1946-2008. *Canadian Journal of Forest Research* 40: 1-12.
- Thomas, S.L., **R.G. Wagner**, and W.A. Halteman. 2009. Influence of harvest gaps and coarse woody material on click beetles (Coleoptera: Elateridae) in Maine's Acadian forest. *Biodiversity and Conservation* 18(9): 2405-2420.
- Greenwood, M.S., C.L. O'Brien, J.D. Schatz, C.A. Diggins, M.E. Day, G.L. Jacobson, A.S. White and **R.G. Wagner**. 2008. Is early life cycle success a determinant of the abundance of red spruce and balsam fir. *Canadian Journal of Forest Research*. 38: 2295-2305.
- Miller, K.M., **R.G. Wagner**, and S.A. Woods. 2008. Arboreal arthropod associations with epiphytes following gap harvesting in the Acadian forest of Maine. *The Bryologist* 111(3): 424–434.
- Saunders, M.R. and **R.G. Wagner**. 2008. Height-diameter models with random coefficients and site variables for tree species of central Maine. *Annals of Forest Science* 65(2): 203.
- Saunders, M.R. and **R.G. Wagner**. 2008. Long-term spatial and structural dynamics in Acadian mixedwood stands managed under various silvicultural systems. *Canadian Journal of Forest Research* 38: 498-517.
- Miller, K.M., **R.G. Wagner**, and S.A. Woods. 2007. Effect of gap harvesting on epiphytes and bark-dwelling arthropods in the Acadian forest of central Maine. *Canadian Journal of Forest Research* 37: 2175-2187.
- Wagner, R.G.**, and A.P. Robinson. 2006. Critical period of interspecific competition for four northern conifers: Ten-year growth and associated vegetation dynamics. *Canadian Journal of Forest Research* 36: 2474-2485.

- Little, K.M., I. Willoughby, **R.G. Wagner**, P. Adams, H. Frochot, J. Gava, S. Gous, R.A. Lautenschlager, G. Örlander, K.V. Sankaran and R.P. Wei. 2006. Towards reduced herbicide use in forest vegetation management. *Southern African Forestry Journal* 207: 63-80.
- Etheridge, D.A., D.A. MacLean, **R.G. Wagner**, and J.S. Wilson. 2006. Effects of intensive forest management on stand and landscape characteristics in northern New Brunswick, Canada (1945–2027). *Landscape Ecology* 21: 509–524.
- Wagner, R.G.**, K.M. Little, B. Richardson, and K. McNabb. 2006. The role of vegetation management for enhancing productivity of the world’s forests. *Forestry* 79(1): 57-79.
- Etheridge, D.A., D.A. MacLean, **R.G. Wagner**, and J.S. Wilson. 2005. Changes in landscape composition and stand structure from 1945–2002 on an industrial forest in New Brunswick, Canada. *Canadian Journal of Forest Research* 35: 1965–1977.
- Randolph, K.C., R.S. Seymour, and **R.G. Wagner**. 2005. Developing optimal commercial thinning prescriptions: A new graphical approach. *Northern Journal of Applied Forestry* 22(3):170-174.
- Wagner, R.G.**, M. Newton, E.C. Cole, J.H. Miller, and B.D. Shiver. 2004. The role of herbicides for enhancing forest productivity and conserving land for biodiversity in North America. *Wildlife Society Bulletin*. 32(4): 1028-1041.
- Pitt, D., **R.G. Wagner**, and W.D. Towill. 2004. Ten years of vegetation succession following ground-applied release treatments in young black spruce plantations. *Northern Journal of Applied Forestry*. 21(3): 123-134.
- Fraver, S., **R.G. Wagner**, and M. Day. 2002. Dynamics of down woody debris following gap harvesting in the Acadian forest of central Maine, USA. *Canadian Journal of Forest Research* 32: 2094-2105.
- Robinson, D.E., **R.G. Wagner**, and C.J. Swanton. 2002. Effects of nitrogen on the growth of jack pine competing with Canada blue-joint grass and large-leaved aster. *Forest Ecology & Management*. 160: 233-242.
- Noland, T.L., G.H. Mohammed, and **R.G. Wagner**. 2001. Morphological characteristics associated with tolerance to competition from herbaceous vegetation for jack pine, black spruce, and white pine seedlings. *New Forests* 21: 199-215.
- Robinson, D.E., **R.G. Wagner**, F.W. Bell, and C.J. Swanton. 2001. Photosynthesis, nitrogen-use efficiency, and water-use efficiency of jack pine seedlings in competition with four boreal forest plant species. *Canadian Journal of Forest Research* 31: 2014-2025.
- Shropshire, C., **R.G. Wagner**, F.W. Bell, and C.J. Swanton. 2001. Light attenuation by early successional plant species of the boreal forest. *Canadian Journal of Forest Research* 31: 812–823.
- Wagner, R.G.** 2000. Competition and critical-period thresholds for vegetation management in young conifer stands. *Forestry Chronicle* 76(6): 961-968.

- Bell, F.W., M.T. Ter-Mikaelian, and **R.G. Wagner**. 2000. Relative competitiveness of nine early-successional species of boreal forest plants associated with seedlings of jack pine and black spruce. *Canadian Journal of Forest Research* 30: 790-800.
- Wagner, R.G.**, G.H. Mohammed, and T.L. Noland. 1999. Critical period of interspecific competition for northern conifers associated with herbaceous vegetation. *Canadian Journal of Forest Research* 29: 890-897.
- Ter-Mikaelian, M.T., **R.G. Wagner**, F.W. Bell, and C. Shropshire. 1999. Comparison of photosynthetically active radiation and cover estimation for measuring the effects of interspecific competition on jack pine seedlings. *Canadian Journal of Forest Research* 29: 883-889.
- Pitt, D.G., M.T. Dumas, R.E. Wall, D.G. Thompson, L. Lanteigne, W. Hintz, G. Sampson, and **R.G. Wagner**. 1999. *Chondrostereum purpureum* as a biological control agent in forest vegetation management. I. Efficacy on speckled alder, red maple, and aspen in eastern Canada. *Canadian Journal of Forest Research* 29: 841-851.
- Sullivan, T.P., R.A. Lautenschlager, and **R.G. Wagner**. 1999. Clearcutting and burning of northern spruce-fir forests: implications for small mammal communities. *Journal of Applied Ecology* 36(3): 327-344.
- Wagner, R.G.**, and M.T. Ter-Mikaelian. 1999. Comparison of biomass component equations for four species of northern coniferous tree seedlings. *Annals of Forest Science* 56: 193-199.
- Wagner, R.G.**, J. Flynn, R. Gregory, and P. Slovic. 1998. Public perceptions of risk and acceptability of forest vegetation management alternatives in Ontario. *Forestry Chronicle* 74(5): 720-727.
- Wagner, R.G.**, J. Flynn, R. Gregory, C.K. Mertz, and P. Slovic. 1998. Acceptable practices in Ontario's forests: Differences between the public and forestry professionals. *New Forests* 16: 139-154.
- Lautenschlager, R.A., F.W. Bell, **R.G. Wagner**, and P. Reynolds. 1998. The Fallingsnow Ecosystem Project: Documenting the consequences of conifer release alternatives. *Journal of Forestry* 96(11): 20-27.
- Sullivan, T.P., C. Nowotny, R.A. Lautenschlager, and **R.G. Wagner**. 1998. Silvicultural use of herbicide in sub-boreal spruce forest: implications for small mammal population dynamics. *Journal of Wildlife Management* 62(4): 1196-1206.
- Wagner, R.G.**, and S.R. Radosevich. 1998. Neighborhood approach for quantifying interspecific competition in coastal Oregon forests. *Ecological Applications* 8(3): 779-794.
- Sullivan, T.P., D.S. Sullivan, E.J. Hogue, R.A. Lautenschlager, and **R.G. Wagner**. 1998. Population dynamics of small mammals in relation to vegetation management in orchard agroecosystems: Compensatory responses in abundance and biomass. *Crop Protection* 17(1): 1-11.
- Sullivan, T.P., **R.G. Wagner**, D.G. Pitt, R.A. Lautenschlager, and D.G. Chen. 1998. Changes in diversity of plant and small mammal communities after herbicide application in a sub-boreal spruce forest. *Canadian Journal of Forest Research* 28: 168-177.

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- Pitt, D.G., **R.G. Wagner**, R.J. Hall, D.J. King, D.G. Leckie, and U. Runesson. 1997. Use of remote sensing for forest vegetation management: a problem analysis. *Forestry Chronicle* 73(4): 459-477.
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- Ter-Mikaelian, M.T., and **R.G. Wagner**. 1997. Distance-independent models for predicting photosynthetically active radiation transmission through young forest plant canopies. *Canadian Journal of Forest Research* 27: 127-130.
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- Mohammed, G.H., T.L. Noland, W.C. Parker, and **R.G. Wagner**. 1997. Pre-planting physiological stress assessment to forecast field growth performance of jack pine and black spruce. *Forest Ecology & Management* 92: 107-117.
- Bell, F.W., R.A. Lautenschlager, **R.G. Wagner**, D.G. Pitt, J.W. Hawkins, and K.R. Ride. 1997. Motor-manual, mechanical, and herbicide release affect early successional vegetation in northwestern Ontario. *Forestry Chronicle* 73(1): 61-68.
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- Lautenschlager, R.A., F.W. Bell, and **R.G. Wagner**. 1997. Alternative conifer release treatments affect small mammals in northwestern Ontario. *Forestry Chronicle* 73(1): 99-106.
- Wagner, R.G.**, T.L. Noland, and G.H. Mohammed. 1996. Timing and duration of herbaceous vegetation control around four northern coniferous species. *New Zealand Journal of Forestry Science* 26(1/2): 39-52.
- Sullivan, T.P., R.A. Lautenschlager, and **R.G. Wagner**. 1996. Influence of glyphosate on vegetation dynamics in different successional stages of sub-boreal spruce forest. *Weed Technology* 10: 439-446.
- Liu, S.H., R.A. Campbell, J.A. Studens, and **R.G. Wagner**. 1996. Absorption and translocation of glyphosate in aspen (*Populus tremuloides* Michx.) as influenced by droplet size, droplet number and herbicide concentration. *Weed Science* 44: 482-488.
- Korzukhin, M.D., M.T. Ter-Mikaelian, and **R.G. Wagner**. 1996. Process versus empirical models: which

- approach for forest ecosystem management? *Canadian Journal of Forest Research* 26: 879-887.
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- Campbell, R.A., J.E. Wood, E.G. Mitchell, J. Studens, and **R.G. Wagner**. 1994. A simple low volume laboratory research spray system. *Weed Technology* 8: 87-92.
- Wagner, R.G.** 1993. Research directions to advance forest vegetation management in North America. *Canadian Journal of Forest Research* 23: 2317-2327.
- Wagner, R.G.** and J.C. Zasada. 1991. Integrating plant autecology and silvicultural activities to prevent forest vegetation management problems. *Forestry Chronicle* 67(5): 506-513.
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**Wagner, R.G.** 1985. A quantitative approach to evaluating levels of weed competition in young forest plantations. *In* Weed Science Society of America Abstracts 25:

Radosevich, S.R., **R.G. Wagner**, and D.R. Orcutt. 1984. Predicting effects of modified cropping systems: a forestry example. (abstract) *In* Proceedings of the 81st Annual Meeting of the American Society for Horticulture Science. Vancouver, British Columbia, Canada.

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Walstad, J.D. and **R.G. Wagner**. 1982. Human health and 2,4-D exposure. (abstract) *In* Proceedings of the 32nd Annual Weed Conference. Washington State Weed Association, Yakima, WA.

**RESEARCH GRANTS:**

*Total Research Funds Received:*

<b>Career Total:</b>	
As PI and Co-PI	\$ 16,754,881
<b>As Director of Research Programs</b>	<b>\$ 23,823,133</b>
University of Maine's Center for Research on Sustainable Forests (CRSF)	\$ 1,411,076
University of Maine's Cooperative Forestry Research Unit (CFRU)	\$ 7,412,057
Ontario's Vegetation Management Alternatives Program (VMAP)	\$ 15,000,000
<b>Career Total Research Funds Received</b>	<b>\$ 40,578,014</b>
<b>UMaine Total (1998-2013):</b>	
As PI and Co-PI	\$ 5,896,500
As Director of CFRU and CRSF	\$ 8,823,133
As Co-PI on Forest BioProducts EPSCoR grant	\$ 10,350,000
<b>TOTAL</b>	<b>\$ 25,069,633</b>

*Successful:*

- 2014-15 **Wagner, R.G.** Northeastern States Research Cooperative, Theme 3: Forest Productivity and Forest Products. USDA Forest Service, Northern Research Station. External competitive research funds received as Director of Center for Research on Sustainable Forests. \$350,906.
- 2014-19 **Wagner, R.G.** and A.R. Weiskittel. 2013. Phase 2 - UMaine Membership in IUCRC Center for Advanced Forestry Systems. National Science Foundation. \$300,000.
- 2013-18 **Wagner, R.G.** Barbara Wheatland Professorship of Geospatial Innovation, Maine Timberlands Charitable Trust. \$250,000.
- 2013-18 **Wagner, R.G.** and J.C. Brissette. Assessing Carbon and Climate Dynamics in the Acadian Forest. 2013-2018 Joint Venture Agreement between US Forest Service, Northern Research Station and University of Maine, School of Forest Resources. \$358,380.
- 2012 **Wagner, R.G.** Barbara Wheatland Geospatial Analysis Laboratory Excellence Fund, Maine Timberlands Charitable Trust, \$200,000.
- 1999-Present **Wagner, R.G.**, Director, Cooperative Forestry Research Unit, University of Maine. Annual contributions from member organizations: FY99-00 \$387,662; FY00-01 \$322,334; FY01-02 \$432,059; FY02-03 \$391,235; FY03-04 \$403,060; FY04-05 \$320,905; FY05-06 \$415,812; FY06-07 \$575,800; FY07-08 \$454,283; FY08-09 \$479,433; FY09-10 \$383,206; FY10-11 \$490,001, FY11-12 \$492,791; FY12-13 \$500,107; FY13-14 \$506,022; FY14-15 \$505,249. **Total \$7,062,057.**
- 2013-14 **Wagner, R.G.** Northeastern States Research Cooperative, Theme 3: Forest Productivity and Forest Products. USDA Forest Service, Northern Research Station. External competitive research funds received as Director of Center for Research on Sustainable Forests. \$384,665.
- 2012-13 **Wagner, R.G.** Northeastern States Research Cooperative, Theme 3: Forest Productivity and Forest Products. USDA Forest Service, Northern Research Station. External competitive research funds received as Director of Center for Research on Sustainable Forests. \$414,571.
- 2011-12 **Wagner, R.G.** Northeastern States Research Cooperative, Theme 3: Forest Productivity and Forest Products. USDA Forest Service, Northern Research Station. External competitive research funds received as Director of Center for Research on Sustainable Forests. \$260,934.
- 2011-13 Weiskittel, A., B. Rice, **R.G. Wagner**, and J. Wilson. Improved sampling methods and growth & yield models for partially harvested stands. Cooperative Forestry Research Unit. \$36,024.
- 2011-14 **Wagner, R.G.**, A. Weiskittel, and A. Nelson. Incorporating Young Hardwood

- Stand Responses to Various Levels of Silviculture and Stand Composition into New CFRU Growth & Yield Models. Cooperative Forestry Research Unit. \$67,871.
- 2011-14 **Wagner, R.G.**, J. Benjamin, A. Weiskittel, R. Seymour, and B. Roth. Austin Pond Study: Third Wave of Treatments to Assess Rotation-Length Outcomes for Silvicultural Options in Maine's Northern Forest. Cooperative Forestry Research Unit. \$121,258.
- 2011-16 **Wagner, R.G.** Effects of Gap Harvesting, Commercial Thinning, and Silvicultural Intensity on Stand Development and Productivity. Maine Agricultural & Forest Experiment Station, University of Maine, Orono, ME.
- 2010-13 Matthew G. Olson, **R.G. Wagner**, A.R. Weiskittel, M.R. Saunders, and A.S. Nelson. Role of silvicultural intensity and species composition objectives on the growth, dynamics, and carbon balance of Northeastern forest stands. USDA Northeastern States Research Cooperative - Theme 3. \$71,808.
- 2010-12 Nelson, A.S., **R.G. Wagner**, M.E. Day, and I.J. Fernandez. Silvicultural effects on environmental conditions and resulting above-ground productivity and carbon sequestration of northeastern mixedwood forests. USDA Northeastern States Research Cooperative - Theme 3. \$40,000.
- 2010-12 Rice, B., A. Weiskittel, J. Wilson, and **R.G. Wagner**. Effects of nonselective partial harvesting in Maine's working forests. USDA Northeastern States Research Cooperative - Theme 3. \$41,704.
- 2010-11 Olson, M., S. Meyer, **R.G. Wagner**, and R.S. Seymour. Response of tree regeneration to commercial thinning in spruce-fir stands of northern Maine: first-decade results from the CFRU's Commercial Thinning Research Network. USDA Northeastern States Research Cooperative - Theme 3. \$11,044.
- 2010-11 Olson, M., S. Meyer, **R.G. Wagner**, and R.S. Seymour. Response of tree regeneration to commercial thinning in spruce-fir stands of northern Maine: first-decade results from the CFRU's Commercial Thinning Research Network. Cooperative Forestry Research Unit. \$11,044.
- 2010 **Wagner, R.G.** and A.R. Weiskittel. Application for Supplemental Funding to Support a Research Experience for Undergraduates (REU) for the I/UCRC Center for Advanced Forestry Systems. National Science Foundation. \$7,500.
- 2009-14 **Robert G. Wagner**, John C. Brissette, Laura S. Kenefic, and Matthew G. Olson. Predicting the effects of traditional and emerging forestry practices on regeneration, productivity, and dynamics of the Acadian forest. 2009-2014 Joint Venture Agreement between the U.S. Forest Service, Northern Research Station and University of Maine. \$332,375.
- 2009-13 **Robert G. Wagner** and Aaron R. Weiskittel. University of Maine Proposal For Joining The NSF Center For Advanced Forestry Systems (CAFS).



- National Science Foundation, Industry/University Cooperative Research Centers Program (I/UCRC). \$350,000.
- 2009 Pendse, H., M. Bilodeau, D. Donahue, A. Halog, D. Hutto, D. Neivandt, J. Rubin, S.M. Shaler, **R.G. Wagner**, P. Walsum, A. Weiskittel, and C. Wheeler. Intent to Plan for Forest Bioproducts Research Institute (FBRI), University of Maine, Orono, ME.
- 2008-12 Spencer Meyer, **Robert G. Wagner**, Robert S. Seymour, and Aaron Weiskittel. CFRU Commercial Thinning Research Network: Continued Measurements and New Opportunities, Cooperative Forestry Research Unit, University of Maine. \$187,613.
- 2008-11 Aaron Weiskittel, John Kershaw, John Brissette, Robert Wagner, Jeff Gove, and Chad Keyser. Development of an Acadian Variant of the FVS individual tree growth model. USDA Agenda 2020 Program. \$81,933.
- 2008-11 **Robert G. Wagner** and Andrew Nelson. Improving the Species Composition of Understory Hardwood Regeneration on Beech-Dominated Sites: Continued Measurement. Cooperative Forestry Research Unit, University of Maine. \$39,509.
- 2008-11 Aaron Weiskittel, **Robert G. Wagner**, and Robert S. Seymour. Refinement of the FVS-NE individual tree growth model. Cooperative Forestry Research Unit, University of Maine. \$86,055.
- 2008-09 **Robert G. Wagner**. Management of Data from Long-Term Silvicultural Research, USDA Forest Service, Northern Research Station. \$18,500.
- 2007-10 Wiersma, B. S., Sader, **R.G. Wagner**, R.S. Seymour, and S. Meyer. Maine ForCAST Initiative: Forecasting Maine's Future Forest. Cooperative Forestry Research Unit, University of Maine. \$30,000.
- 2007-09 Wilson, J., J. Leahy, J. Benjamin, **R. Wagner**. Conservation Landowners in the Northern Forest: An Interdisciplinary Land Management Needs Assessment of Land Trusts & Conservation Easement Holder. Northeastern States Research Cooperative: Theme 1. \$50,990.
- 2007-09 Benjamin, J.S. and **R.G. Wagner**. Evaluation of biomass harvest systems for improvement of low quality beech-dominated hardwood stands in Maine. Cooperative Forestry Research Unit, University of Maine. \$44,176.
- 2007-09 Saunders, M.R., R.S. Seymour, and **R.G. Wagner**. Productivity and financial viability of natural-disturbance-based management in the Acadian Forest. Northeast States Research Coop Theme 1. \$53,095.
- 2007-08 Meyer, S.R. and **R.G. Wagner**. Capturing the Value of 30 Years of Research: Long-term CFRU Data Management. Cooperative Forestry Research Unit, University of Maine. \$44,880.
- 2006-09 Eckardt, M.J., H. Pendse, S.M. Shaler, **R.G. Wagner**, and A. vanHeiningen.

- Investing in Maine Research Infrastructure: Sustainable Forest Bioproducts. National Science Foundation EPSCoR Program. \$6.9 million and \$3.45 million Maine Economic Improvement Fund. Total \$10.35 million.
- 2006-09 **Wagner, R.G.**, R. Lemin, and M. McCormack. Post-harvest strategy for improving the composition of hardwood regeneration on beech-dominated sites in Maine. Cooperative Forestry Research Unit, University of Maine. \$16,189.
- 2006-08 Wilson, J.S., **R.G. Wagner**, R.S. Seymour, and D.A. MacLean. Assessing the risk and impact of future spruce budworm outbreaks in Maine Forests. Cooperative Forestry Research Unit, University of Maine. \$64,055.
- 2006-08 Seymour, R.S. and **R.G. Wagner**. Protocols for Assessing the Silvicultural Aspects of Timber Harvests in Maine. Maine Forest Service. \$75,945.
- 2006-08 **Wagner, R.G.**, and M.G. Olson. Spatial and Temporal Patterns of Tree Regeneration in the Acadian Forest of East-Central Maine. Northern States Research Cooperative: Theme 3 Northern Forest Scholars Program. \$40,000.
- 2006-07 **Wagner, R.G.**, D. Pitt, J. McLaughlin, B. Parker, and A. Stinson. 15-Year growth and yield from Ontario critical period of vegetative competition study. Forestry Futures Trust Ontario - Enhanced Forest Productivity Science (EFPS) Program. \$29,500 CDN.
- 2006-07 **Wagner, R.G.**, R.S. Seymour, and S. Meyer. Maine Commercial Thinning Research Network: Analysis of 5th-year growth & yield responses. Cooperative Forestry Research Unit, University of Maine. \$24,736.
- 2005-10 **Wagner, R.G.**, Forest Ecosystem Research Program (FERP): Gap expansion and spatial hypotheses. Maine Agricultural & Forest Experiment Station. Total \$404,442.
- 2005-08 **Wagner, R.G.**, and R.S. Seymour. Commercial Thinning Research Network: Growth & yield model development and continued measurement of network sites. Cooperative Forestry Research Unit, University of Maine. Total FY05-06 \$36,182; FY06-07 \$38,285; FY07-08 \$38,222. Total \$112,689.
- 2005-08 **Wagner, R.G.**, and R.F. Keefe. Influence of Precommercial Thinning on Long-term Stand Growth and Financial Returns in Northeastern Spruce-fir Stands. Cooperative Forestry Research Unit, University of Maine. Total \$41,400.
- 2005-08 **Wagner, R.G.**, and R.F. Keefe. Influence of Precommercial Thinning on Long-term Stand Growth and Financial Returns in Northeastern Spruce-fir Stands. USFS Agenda 2020 Program. Total \$132,000.
- 2005-08 **Wagner, R.G.** Hardwood silviculture research. Cooperative Forestry Research Unit, University of Maine. Total \$24,000.
- 2005-08 MacLean, D., M. Béland, T. Erdle, G. Forbes, K. Frego, M. Roberts, C.

- Samson, M. Villard, **R. Wagner**, and J. Wilson. Management implications of forest dynamics, succession, and habitat relationships under differing levels of silviculture in New Brunswick forests. Sustainable Forest Management Network (SFMN), Canadian Forest Service, Total \$433,000 CDN (received by University of New Brunswick).
- 2005 **Wagner, R.G.**, I.J. Fernandez, M.S. Greenwood, D.J. Harrison, G.L. Jacobson, Jr., S.A. Sader, S.M. Shaler, G.B. Wiersma, and J.S. Wilson. Intent to Plan for Center for Research on Sustainable Forests, University of Maine, Orono.
- 2003-08 **Wagner, R.G.**, and J.C. Brissette. Effect of current and emerging silvicultural practices on forest productivity and ecosystem dynamics in the Acadian forest. Joint Venture Agreement between the USDA Forest Service, Northeastern Research Station, and The University of Maine. Total \$220,029.
- 2003-06 **Wagner, R.G.**, J.C. Brissette, M.R. Saunders, and R. Dionne. Influence of silvicultural intensity and composition objectives on the productivity of regenerating forest stands in Maine. USFS Agenda 2020 Program. Total \$113,056.
- 2003-05 **Wagner, R.G.**, and D.J. McConville. Growth response and economic return from fertilization of pre-commercially thinned spruce-fir stands: Remeasurement of CFRU and IP study sites. Cooperative Forestry Research Unit. Total \$40,049.
- 2002-05 Minocha, R., J. Aber, S.C. Minocha and **R.G. Wagner**. Effects of various silviculture treatments on physiological stress, carbon and nitrogen metabolism in trees and their relationship to forest productivity. USFS Agenda 2020 Program. Total \$110,340 (received by USFS Northeastern Research Station).
- 2002 **Wagner, R.G.**, and D.A. MacLean. Eastern CANUSA Forest Science Conference. Irving Woodlands (\$3,000), U. Maine College of NSFA (\$3,000), Cooperative Forestry Research Unit (\$2,000), U. Maine Green Endowment Fund (\$1,500). Total \$9,500.
- 2001 Noland, T.L. and **R.G. Wagner**. 10-year Re-measurement of Critical Period Experiment at Searchmont. Agricultural Research Institute of Ontario, Guelph, Ontario. \$12,510 CDN (received by Ontario Forest Research Institute).
- 2000-05 **Wagner, R.G.**, R.S. Seymour, M.L. Hunter, S.A. Woods, J.C. Brissette, A.S. White, I.J. Fernandez, and M.S. Greenwood. Forest Ecosystem Research Program (FERP): Ecological effects of alternative harvesting practices in the Acadian forest. Maine Agricultural & Forest Experiment Station. Total \$100,000.
- 2000-03 Wagner R.G., M.L. Hunter, S.A. Woods, and S.R. Fraver. Role of canopy gaps and downed woody material in maintaining biodiversity in the Acadian forest of central Maine. USDA-CSREES National Research Initiative Competitive

- Grants Program (NRICGP). Total \$260,000.
- 2000-02 MacLean, D., **R.G. Wagner**, I. Methven, and K. Porter. Spatial and temporal patterns of natural and man-caused forest disturbance on the J.D. Irving, Ltd. Black Brook District: Past, present, and future. Sustainable Forest Management Network (SFMN), Canadian Forest Service, FY2000-2002. Total \$271,000 CDN (received by University of New Brunswick).
- 1999-05 **Wagner, R.G.**, and R.S. Seymour. Commercial Thinning Research Network. Cooperative Forestry Research Unit. FY 1999-00 (\$64,535), FY00-01 (\$101,352), FY01-02 (\$53,234), FY02-05 (\$209,695). Total \$428,816.
- 1999-00 **Wagner, R.G.**, and R.S. Seymour. Identifying the most productive areas of silviculture research for enhancing the wood supply of Maine. FY99-00 shared funding by Maine Forest Service (\$15,000), Cooperative Forestry Research Unit (\$35,000), and NSFA College R&D Funds (\$10,000) for FY1999-2000. Total \$60,000.
- 1998-01 **Wagner, R.G.** Austin Pond 2000 Plus: Long-term effects of herbicide application and pre-commercial thinning on the development of young spruce-fir forest. Cooperative Forestry Research Unit, FY1998-99 (\$35,431), FY99-00 (\$16,568), FY00-01 (\$18,559). Total \$70,558.
- 1998-00 **Wagner, R.G.** Forest Ecosystem Research Program. Maine Agricultural and Forest Experiment Station, FY 1998-99 \$20,000, FY99-00 \$20,000. Total \$40,000.
- 1998-00 **Wagner, R.G.** and S.J. Colombo. Seasonal tolerance of red spruce and balsam fir to glyphosate, imazapyr, and triclopyr applications in Maine. Cooperative Forestry Research Unit, FY 1998-99 \$1,250, FY99-00 \$2,500. Total \$3,750.
- 1995 **Wagner, R.G.** and D.G. Pitt. Use of remote sensing for forest vegetation management: a national workshop and problem analysis. Abitibi-Price Inc., Thunder Bay, Ontario. \$5,000.
- 1991-95 **Wagner, R.G.** Vegetation Management Alternatives Program (VMAP). This research, education, and field delivery program developed alternatives to forest herbicide use and a better understanding of forest ecosystems. Ontario Legislature through a Cabinet Submission for 1991-1995. \$15,000,000 CDN
- 1989 **Wagner, R.G.** and K. Cromack. Nutrient dynamics under different forest vegetation management regimes. Department of Forest Science, intra-faculty grant program, Oregon State University. \$3,000.
- 1988 **Wagner, R.G.** CLUMP: Competition losses using maple projections system -- Software development. Washington Department of Natural Resources. \$5,000.
- 1987-90 Opalach, D., S.R. Radosevich, M. Newton, **R.G. Wagner**, and T.B. Harrington. A diagnostic tool for predicting the effects of interspecific competition on the growth and yield of young Douglas-fir stands. COPE

- (Coastal Oregon Productivity Enhancement Program) and CRAFTS (Coordinated Research for Alternative Forestry Treatments and Systems). 8/1/87 to 8/1/90. \$161,425.
- 1987 **Wagner, R.G.** Development of a forest vegetation management decision-support system. Department of Forest Science, Oregon State University. \$6,000.
- 1984-88 S.R. Radosevich, D.E. Hibbs, M. Newton, and **R.G. Wagner**. Interference between Douglas-fir and red alder in the Pacific Coast Range. NAPIAP (National Agricultural Pesticide Impact Assessment Program). 9/1/83 to 9/1/88. \$155,848.
- 1983-89 **Wagner, R.G.** and S.R. Radosevich. Interspecific competition indices for vegetation management decisions in young Douglas-fir stands on the Siuslaw National Forest. Siuslaw National Forest, Corvallis, OR. 1/1/84 to 1/1/89. \$172,108.

*Pending:*

None.

*In Preparation:*

None.

*Unsuccessful: (since 1998)*

- 2013-18 Rubin, J., P. Anderson, C. Colgan, A. Demeo, D. Donahue, D. Doran, L. Lindenfeld, H. Pendse, L. Silka, M. Teisl, **R. Wagner**, and G. Zydlewski. 2013. Initiative for Sustainable Energy Advancement. EPSCoR UMaine proposal. \$20,000,000.
- 2012-2015 Hemant P. Pendse, **R.G. Wagner**, M. Clayton Wheeler, Jonathan Rubin. 2011. Use of Novel TDO Process and/or Roadside Pyrolysis to Expand Woodsheds and Feedstock Supplies for Making Drop-in Liquid Hydrocarbon Fuels. U.S. Department of Energy, Energy Efficiency and Renewable Energy and U.S. Department of Agriculture, National Institute of Food and Agriculture, Biomass Research and Development Initiative. Pre-Application. \$6,000,000.
- 2011-13 Weiskittel, A., C. Hennigar, S. Shaler, **R. Wagner**. Integrated Scenario Analysis of Net Greenhouse Gas Emissions from Maine's Forest and Forest Sector. Cooperative Forestry Research Unit. \$95,040.
- 2011-15 Rice, B., **R. Wagner**, A. Weiskittel, J. Wilson, M. Olson, and R. Seymour. 2010. Carbon Sequestration Under Ecological Forestry in the Temperate Mixedwood Forests of Northeastern North America. Submitted to United States

- Department of Defense, Strategic Environmental Research and Development Program (SERDP). SISON-11-03. \$467,228.
- 2010-13 **Robert G. Wagner**, Matthew G. Olson, Robert Seymour, Spencer Meyer. Response of understory plant communities to commercial thinning in former pre-commercially thinned softwood stands in the Northeast. USDA Northeastern States Research Cooperative - Theme 4. Total \$76,381
- 2008-11 **Wagner, R.G.**, A. Weiskittel, K. Laustsen, E. Bowling, R. Seymour, J. Wilson, and J. Benjamin. Sustainable harvest levels and characteristics of biomass feedstock from Maine's forest. U.S. Department of Energy (DOE) and the U.S. Department of Agriculture (USDA). \$1,109,382.
- 2008-10 Ivan J. Fernandez, **Robert G. Wagner**, and Michael San Clements. Does Forest Harvesting Alter Soil Carbon and Nutrient Status? Northeastern States Research Cooperative: Theme 2. \$147,985.
- 2008-10 **Robert G. Wagner**, Aaron Weiskittel, and Jeremy Wilson. Predicting biomass productivity and availability from Maine's forests for an emerging bioenergy and bioproducts economy. Northeastern States Research Cooperative: Theme 3. \$55,172.
- 2007-09 Day, M.E., **R.G. Wagner**, M.R. Saunders, and M.S. Greenwood. A holistic approach to understanding the factors that limit the productivity of stands managed under varying degrees of silvicultural intensity. Northeastern States Research Cooperative: Theme 3. \$68,228.
- 2007-09 Saunders, M.R., **R.G. Wagner**, M.L. Hunter, and M.G. Olson. Integrating spatially explicit methods and models into along-term forest ecosystem study in Maine's Acadian forest. National Science Foundation - LTREB. Total \$412,728.
- 2007-08 Minocha, R., J.C. Brissette, and **R.G. Wagner**. Monitoring physiological responses of forest trees to thinning treatments in order to evaluate the use of selected metabolites as markers of tree health and stand productivity. Northeastern States Research Cooperative: Theme 3. \$28,000.
- 2006-09 Greenwood, M.S., M.E. Day, **R.G. Wagner**, J.S. Wilson, A.S. White, and G.L. Jacobson, Jr. Potential influence of climate and human intervention on future distribution of conifers in the Acadian forest. National Science Foundation. Total \$665,560.
- 2005-06 **Wagner, R.G.** Restoration of forests with severe Japanese barberry infestations. National Fish and Wildlife Foundation. Total \$46,896.
- 2005 Wilson, J.S., and **R.G. Wagner**. Influence of partial cutting on long-term forest composition and biomass productivity in Maine. U.S. Department of Energy, Biomass Research and Development Initiative. (preproposal).
- 2004 Wilson, J.S., **R.G. Wagner**, and D.A. MacLean. Understanding Stand Type Dynamics in Intensively Managed Northeastern Forests. USFS Agenda 2020

- Program. Total \$109,013.
- 2004 Minocha, R., K.T. Smith, **R.G. Wagner**, and S.C. Minocha. Foliar biochemical indicators of growth response to commercial thinning in Maine spruce-fir stands. USFS Agenda 2020 Program. Total \$146,375.
- 2004 Greenwood, M.S., M.E. Day, **R.G. Wagner**, A.S. White, G.L. Jacobson Jr. Potential influence of climate and human intervention on future distribution of conifers in the Acadian forest. USDA-CSREES National Research Initiative Competitive Grants Program (NRICGP). Total \$793,470.
- 2004 Hagan, J.M., A.A. Whitman, **R.G. Wagner**. Development of a practical index to assess late-successional content in managed forests. USDA-CSREES National Research Initiative Competitive Grants Program (NRICGP). Total \$490,610.
- 2004 Livingston, W.H., **R.G. Wagner**, and K.J. Boyle. Engaging the local communities in managing forests: Using silviculture to conserve natural forests on Monhegan Island, Maine. Northeastern States Research Cooperative, NSRC Theme 1 Preproposal. Total \$87,342.
- 2004 Cronan, C., **R.G. Wagner**, and D. Foster. Establishing an institutional framework and research design for a Northeastern NEON (National Ecological Observatory Network). Northeastern States Research Cooperative, NSRC Theme 2 Preproposal. Total \$62,000.
- 2002 Wilson, J.S., **R.G. Wagner**, F.A. Servello, and M.R. Saunders. A Landscape Approach to Providing Specific Habitats in Managed Forests: An Example using Deer Wintering Areas in Maine. USDA-CSREES National Research Initiative Competitive Grants Program (NRICGP). Total \$447,878.
- 2002 **Wagner, R.G.**, and D.A. MacLean. Eastern CANUSA Forest Science Conference. Maine Outdoor Heritage Fund. \$16,900.
- 1999 Thompson, D.G., C. Chen, K. Babbitt, M. Berrill, and **R.G. Wagner**. Multiple Stressors: Interactive Effects of Forest-Use Herbicide Mixtures in Aquatic Ecosystems With Special Emphasis on Native Amphibians. Submitted for joint funding by National Council of the Paper Industry for Air & Stream Improvement Inc. (NCASI) and Cooperative Forestry Research Unit. \$140,297.
- 1999 Brissette, J., P. Sendek, **R.G. Wagner**, J.M. Hagan. Management of overstocked mixed species stands in northern New England – A CROPS proposal, Submitted to USDA CROPS (Creating OPPortunitieS) program, Washington DC. \$96,500.
- 1999 **Wagner, R.G.** FERP analysis, publication, and external funding. Submitted to U. Maine NSFA College R&D Fund Committee. \$64,600.
- 1998 Boyle, K., J. Poor, and **R.G. Wagner**, Public preferences for forestry practices on private lands in Maine. Submitted to U. Maine NSFA College R&D Fund

Committee. \$19,553.

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**GIFTS RECEIVED:**

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|------|--|
| 2001 | \$1,800 from J.D. Irving Ltd. to support my forest research efforts and for contributions to J.D. Irving Scientific Advisory Committee during 2000.                |
| 1999 | \$2,680 from J.D. Irving Ltd. to support my forest research efforts, in gratitude for contributions to J.D. Irving Scientific Advisory Committee during 1998-1999. |
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**COURSES TAUGHT:**

**Introduction to Forest Resource Professions (SFR 103)** - 3 Credits, U. Maine. Offered annually.

Description: Introduction and overview of global, North American, and Maine forest resources; current and historical use by humans; overview of forest regulation and policy, stewardship and land ethics; measurement and economics of forest resources; history and development of forest resource professions such as private and public foresters, park rangers, conservation managers, forest products specialists, and scientists.

**Forest Regeneration (SFR 410)** - 3 Credits, U. Maine. Offered alternate years.

Description: Provides students with an overview of the principles and practices associated with the successful regeneration of forestlands in North America. Topics include natural and artificial regeneration, seed collection and handling, forest tree nurseries, site preparation, seedling quality and handling, genetics, disease, vegetation management, animal damage protection, early stand management, and ecological considerations.

**Research Methods (SFR 521)** - 3 Credits, U. Maine. Offered every year. (Co-taught with A. White)

Description: Provides graduate students with the fundamental research skills needed to successfully complete their graduate thesis research and introduce them to professional careers in research. Students learn how to plan, write, and critique scientific research proposals. Instruction focuses on direct, hands-on learning by writing a research proposal that can serve as your graduate thesis research proposal. Learning objectives include understanding the: scientific method, research planning process, components of a research proposal, use of critical thinking to develop and review research proposals, importance of objectivity and scientific ethics, and publication process.

**Managing Forest Succession (FES 435/535)** - 3 Credits, U. Maine. Offered alternate years.

Description: Explores ecological theories, scientific methods, technologies, social issues, and practical applications associated with managing the succession of forest vegetation



for purposes of wood production, wildlife habitat, aesthetics, biodiversity, and ecological restoration.

<b>Mean Student Ratings</b> (1=Lowest, 5=Highest)									
Year taught	Course number	Number of students	1. Prepared for class	11. Confidence in instructor	12. Concern for student's progress	13. Instructor, Overall	14. Class worth attending	22. Course, Overall	Mean
2014	SFR 521	11	4.75	4.80	4.90	4.80	4.22	4.57	4.67
2014	SFR 103	48	4.20	4.15	3.73	3.93	3.32	3.44	3.80
2012	SFR 103	30	4.20	4.50	4.00	4.20	4.10	4.00	4.17
2012	FTY410	10	4.70	4.90	4.00	4.60	4.60	4.30	4.52
2011	FES 521	11	4.70	4.80	4.50	4.80	4.60	4.60	4.67
2010	FES 521	8	4.90	4.90	4.60	4.70	4.70	4.90	4.78
2008	FES 535	6	5.00	5.00	4.80	5.00	5.00	4.80	4.93
2006	FES 435	4	4.80	4.80	4.00	4.50	4.50	4.50	4.52
2006	FES 535	2	5.00	5.00	4.50	4.50	5.00	5.00	4.83
2004	FES 435	2	5.00	5.00	4.00	5.00	4.50	5.00	4.75
2004	FES 535	5	5.00	5.00	4.00	4.80	5.00	5.00	4.80
2002	FES 435	3	5.00	5.00	4.70	5.00	4.70	5.00	4.90
2002	FES 535	7	4.60	5.00	4.00	4.40	4.80	4.00	4.47
2000	FES 435	3	5.00	5.00	4.30	4.70	4.70	4.70	4.73
2000	FES 535	5	5.00	5.00	4.80	5.00	5.00	5.00	4.97
<b>Mean</b>		<b>155</b>	<b>4.79</b>	<b>4.86</b>	<b>4.32</b>	<b>4.66</b>	<b>4.58</b>	<b>4.59</b>	<b>4.63</b>

**Other Courses / Sessions:**

Forest Regeneration Module (SFR 300, Forestry Summer Camp) – One-day module taught to undergraduate forestry students on forest regeneration ecology and management (Spring 2014).

Special Study (FTY 345) – 1 credit, U. Maine. Special study on *Managing Forest Succession* (Ian Foertsch) (Spring 2010).

Special Study (FTY 345) – 1 credit, U. Maine. Special study on *Prosopis juliflora* as an invasive exotic in east Africa for a foreign student (Ibrahim Abukar) (Spring 2009).

Forestry Seminar (FES 620) – 1 credit, U. Maine. Organized weekly departmental seminars and discussion sessions (Spring 2001, Fall 2005).

**GRADUATE STUDENTS AND COMMITTEES:**

As Advisor: Post-Docs = 3, PhD = 7, MS = 10, MF = 2

As Committee Member = PhD = 4, MS = 12, MF = 3

<u>Student</u>	<u>Degree</u>	<u>Major</u>	<u>University</u>	<u>Date Completed</u>
<i>Advisor:</i>				
Cody LaChance	MS	Forest Management	U. Maine	In progress

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Jon Doty	MF	Forest Management	U. Maine	In progress
Andrew Nelson	PhD	Silviculture	U. Maine	July 2013
	Thesis:	<i>Nelson, A.S. 2013. Production ecology and stand dynamics of young Acadian forest stands in response to silvicultural intensity and compositional objectives. PhD thesis, University of Maine, Orono.</i>		
Patrick Clune	MS	Silviculture	U. Maine	August 2013
	Thesis:	<i>Clune, P.M. 2013. Growth and development of Maine spruce-fir forests following commercial thinning. M.S. thesis, University of Maine, Orono.</i>		
Matt Olson	PhD	Forest Ecology	U. Maine	December 2009
	Thesis:	<i>Olson, M.G. 2009. Spatial and temporal patterns of tree regeneration in the Acadian forest of central Maine. Ph.D. thesis, University of Maine, Orono.</i>		
Andrew Nelson	MS	Silviculture	U. Maine	December 2009
	Thesis:	<i>Nelson, A.S. 2009. Spatial ecology and compositional management of American beech and sugar maple regeneration in Maine. M.S. thesis, University of Maine, Orono.</i>		
Shelly Thomas	PhD	Ecology & Env. Sci.	U. Maine	May 2007
	Thesis:	<i>Thomas, S.L. 2007. Effects of forest management on click beetle (Coleoptera: Elateridae) assemblages in the Acadian forest of Maine. Ph.D. thesis, University of Maine, Orono.</i>		
Kathryn Miller	MS	Ecol. & Env. Sci.	U. Maine	May 2006
	Thesis:	<i>Miller, K.M. 2006. Arboreal arthropod associations with epiphytes and the effects of gap harvesting in the Acadian forest of central Maine. M.S. thesis, University of Maine, Orono.</i>		
Mike Saunders	PhD	Silviculture	U. Maine	January 2006
	Thesis:	<i>Saunders, M.R. 2006. Dynamics of forest structure under different silvicultural regimes in the Acadian forest. Ph.D. thesis, University of Maine, Orono.</i>		
Keith Kanoti	MS	Forest Ecology	U. Maine	September 2005
	Thesis:	<i>Kanoti, K.G. 2005. Factors influencing the germination, emergence, and early survival of boreal, temperate and exotic Acadian forest tree species in central Maine. M.S. thesis, University of Maine, Orono.</i>		
Dawn Opland	MF	Silviculture	U. Maine	December 2004
	Thesis:	<i>Opland, D.M. 2004. Projected response of spruce-fir forests to commercial thinning in Maine. M.F. Thesis, University of Maine, Orono.</i>		
Darci Schofield	MS	Forest Ecology	U. Maine	December 2003
	Thesis:	<i>Schofield, D.A. 2003. Vegetation dynamics and tree radial growth response in harvest gaps, natural gaps, and closed canopy conditions in Maine's Acadian forest. M.S. thesis, University of Maine, Orono.</i>		
Howard Daggett	MS	Silviculture	U. Maine	July 2003
	Thesis:	<i>Daggett, R.H. 2003. Long-term effects of herbicide and precommercial thinning treatments on species composition, stand structure, and net present value in spruce-fir stands in Maine: The Austin Pond Study.</i>		
Darren Robinson	PhD	Weed Science	U. Guelph, Ontario	September 1999

	Thesis:	<i>Robinson, D.E. 1999. Nitrogen and water use by jack pine and competing boreal forest plant species. PhD thesis, University of Guelph, Ontario.</i>			
Christy Shropshire	MS	Weed Science	U. Guelph, Ontario	June 1999	
	Thesis:	<i>Shropshire, C. 1999. Patterns of light attenuation by early successional plant species of the boreal forest. MS thesis, University of Guelph, Ontario.</i>			
Ben Rice	PhD	Silviculture	U. Maine	2010-14 (N/C)	
John Davidson	MS	Silviculture	U. Maine	2002 (N/C)	
Shawn Fraver	PhD	Forest Ecology	U. Maine	1998-99 (N/C)	
Ruth Kermish	MS	Forest Ecology	U. Maine	1999-00 (N/C)	

*Post-Doctoral Research Fellows:*

Dr. Mohammad Bataineh	Factors affecting natural regeneration in long-term silvicultural experiments in the Acadian Forest	2011-2014
Dr. Mathew Olson	40-year stand dynamics following herbicide and PCT treatments	2009-2010
Dr. Michael Saunders	Modeling thinning responses in spruce-fir stands	2007-2008

*Committee Member:*

Mark Castle	MS	Forest Modeling	U. Maine	In Progress
Mike Quartuch	PhD	Social Sciences	U. Maine	May 2014
Matt Russell	PhD	Forest Modeling	U. Maine	Jun 2012
Baburam Rijal	MS	Forest Modeling	U. Maine	Jan 2012
Joe Pekol	MS	Forest Modeling	U. Maine	July 2011
Andrea Burke	MS	Soils	U. Maine	April 2011
Kate Zellers	MS	Silviculture	U. Maine	Aug 2010
Chuck Coup	MS	Forest Operations	U. Maine	Dec 2009
Luke Amos-Binks	MS	Silviculture	U. New Brunswick	Dec 2009
Julia Breidis	MF	Forest Ecology	U. Maine	Dec 2009
Dina Alberto	MF	Silviculture	U. Maine	July 2009
Cullen Wilson	MS	Soils	U. Maine	April 2008
Jennifer D'Appollonio	MS	Forest Ecology	U. Maine	July 2006
David Etheridge	MS	Silviculture	U. New Brunswick	Apr 2005
Spencer Meyer	MS	Silviculture	U. Maine	Dec 2004
Justin DeRose	MS	Silviculture	U. Maine	Dec 2004
Carol Strojny	MS	Wildlife Ecology	U. Maine	Sep 2004
Jacob Metzler	MS	Forest Mgmt.	U. Maine	Jan 2004
Ben Dow	MF	Silviculture	U. Maine	May 2003
SuzhongTian	PhD	Forest Pathology	U. Maine	Dec 2001
VishakhaMaskey	MS	Ag. Resource Econ.	U. Maine	Sep 2001
Michael Irvine	PhD	Weed Science	U. Guelph, Ontario	Apr 1999

*Honors Thesis Committees:*

Kersi Contractor	BS	Forestry	UMaine	May 2007
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*External Thesis Examiner:*

Nelson Thiffault	PhD	Silviculture	Laval U.	Sep 2003
Paul Adams	PhD	Silviculture	U. Tasmania	Nov 2003

*Exchange Students:*

Patricia Raymond	PhD	Silviculture	Laval U., Quebec	Spring 2000
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**UNIVERSITY COMMITTEES: (SINCE SEPTEMBER 1998)**

2015	Search Committee, Assistant Professor of Forest Operations, School of Forest Resources
2015	Chair, University Indirect Costs Distribution Policy Task Team
2014	Signature Research Area Proposal Group. Co-authored Signature Research Area on Sustainable Forests & Forest-Based Economy
2014	Search Committee for Barbara Wheatland Geospatial professorial position, School of Forest Resources
2013	Search Committee for Forest Ecosystems – Carbon & Climate professorial position, School of Forest Resources
2013	Search Committee for Forest Landscape Management professorial position, School of Forest Resources
2010 - Present	University of Maine Research Council
2008 - 2013	College of NSFA Executive Committee
2008 - 2013	School of Forest Resources Marketing & Alumni Affairs Committee
2008 - 2013	School of Forest Resources Undergraduate Programs Committee
2008 - 2013	School of Forest Resources Graduate Programs Committee
2008 - 2011	School of Forest Resources Curriculum Revision Committee (Chair)
2012	Team Leader, Director performance review, George Mitchell Center
2008 - 2011	College of NSFA Peirce-Webber Awards Committee
2003 - 2005	
2011	Director performance review, Advanced Engineered Wood Composites Laboratory (AEWC)
2010-11	Chair, Search Committee for CFRU Associate Director

2010-11	Chair, Search Committee for Small Woodlot Management Extension and SFR position
2010-11	Chair, Search Committee for Post-Doctoral Research Fellow in Silviculture and Forest Ecology
Spring 2008	Search Committee Chair, post-doctoral position in life cycle analysis, School of Forest Resources
2007-08	Climate Change Institute, Maine Climate Change Assessment Team.
Fall 2007	Search Committee Chair, faculty position in industrial ecology and life cycle analysis, School of Forest Resources
Spring 2007	Search Committee Chair, faculty position in forest biometrics and modeling, School of Forest Resources
2007	Curtis Hutchins Professor of Forest Resources Chair Committee, School of Forest Resources
2006 – Present	Forest BioProduct Research Program, Executive Committee & Leader of Theme 1: Forest BioProduct Sustainability
2006 – Present	Policy Advisory Committee, School of Forest Resources
2006 – Present	Advisory Committee, Center for Research on Sustainable Forests
2003 – 2007	Pierce-Webber Awards Committee
2002 – Present	College Forest Resource Advisory Committee
1998 – Present	FERP Steering Committee (Chair)
1998 – Present	PEF Research Operations Team
2006 – 2007	Chair, Forest Biometrician Faculty Selection Committee
2005	Chair, Planning Committee, Center for Research on Sustainable Forests
2005	Planning Committee, Development of School of Forest Resources
2003 – 2005	Chair, Peer Committee, Department of Forest Ecosystem Science
2003 – 2004	Environmental Policy Roundtable
1999 – 2006	NSFA College Committee of Five
1998 – 1999	Maine / New Brunswick Research Center Steering Committee
1998 – 1999	Program Committee and tour guide, Second North American Forest Ecology Workshop. University of Maine, Orono, June 27 –30, 1999.
1998 – 1999	CFRU Re-structuring Team

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**HONORS AND AWARDS:**

- 2014 Outstanding Public Service Award, Awarded by College of Natural Sciences, Forestry, and Agriculture; University of Maine for the advancement of knowledge about forest management that has directly benefitted the owners and managers of Maine's forestlands.
- 2013 Abby Holman Public Service Award. Presented by Maine Forest Products Council for outstanding service to Maine's forest products industry through leadership of UMaine's forest research and education programs. Award presented annually to an individual (or individuals) that have demonstrated passion, loyalty, and dedication to Maine's forest products industry, to good government, and a robust economy.
- 2007 58th Distinguished Forest Industry Lecturer. Presentation: Forest Regeneration Trends in Canada: The Role of Dinosaurs, Political Correctness, and Emerging Pressures. Myer Horowitz Theater, University of Alberta, Edmonton, AB. November 8, 2007.
- 2007 Outstanding Researcher in Forest Resources 2006-2007, G. Pierce and Florence Pitts Webber Award, University of Maine.
- 2004-Present Endowed Chair: Henry W. Saunders Distinguished Professor in Forestry
- 2003-06 Honorary Research Associate, Faculty of Forestry and Environmental Management, University of New Brunswick, Fredericton, NB, Canada.
- 2002 Outstanding Researcher in Forest Resources 2001-2002, G. Pierce and Florence Pitts Webber Award, University of Maine.
- 1999 Visiting Scientist, Centre de recherche en biologie forestière, Université Laval, Québec, Canada.
- 1995-99 Adjunct Professor, Department of Crop Science, University of Guelph, Guelph, Ontario, Canada.
- 1995 Visiting Scientist, Purdue University, West Lafayette, IN. Invited to present as series of lectures for Continuing Forestry Education Series and university classes, on alternatives to forest herbicides and public attitudes about forest vegetation management.
- 1989 Outstanding Research Program Award, Presented to the CRAFTS Research Cooperative at Oregon State University by the Oregon State Society of American Foresters.
- 1988 Oregon State University Outstanding Research Assistant Award nomination, Department of Forest Science faculty nomination for outstanding performance.
- 1979 Xi Sigma Pi (University of Washington, alpha chapter)
- 1978-79 Graduate Fellowships, University of Washington College of Forest

Resources, A. H. Anderson and J. H. Bloedel Fellowships awarded during four consecutive quarters for scholastic achievement.

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**EXTERNAL PANELS, CONSULTING, & TESTIMONY:**

- 2015                    Quality Assurance Review of the Faculty of Forestry & Environmental Management at the University of New Brunswick. Led team to review the education and research programs delivered by the Faculty of Forestry & Environmental Management.
- 2013-2015            Leader, Maine Spruce Budworm Task Force, Joint Statewide Task Force to develop an assessment and preparation plan for the next spruce budworm outbreak led by University of Maine, Maine Forest Service, and Maine Forest Products Council. Assembled 65 authorities on spruce budworm and forest management to complete a comprehensive strategic plan for the state of Maine.
- 2014                    Testimony on Outcome-Based Forestry to Maine State Legislature’s Agriculture, Conservation, & Forestry Committee, March 30, 2014.
- 2014                    MEDfOR Visiting Scholar, University of Valladolid, Palencia, Spain. January 25 – February 8, 2014. Provided 5 lectures in silviculture to 21 Erasmus Mundus graduate students in the Mediterranean Forestry Program Winter School.
- 2013                    Testimony on Outcome-Based Forestry to Maine State Legislature’s Agriculture, Conservation, & Forestry Committee, November 22, 2013.
- 2012                    Leader, Society of American Foresters Accreditation Team for Colorado State University’s Forestry program. Ft. Collins, CO.
- 2012                    Herbicides in Forest Management: Importance, Public Perceptions, & Consequences of Loss. Four workshops delivered in northern Alberta communities for Alberta Sustainable Resource Development (ASRD)
- 2011 – present      Outcome-Based Forestry Technical Panel, State of Maine, Department of Conservation. (Appointed by Governor LePage)
- 2010 – present      Member of Management Advisory Team (MAT) for Plum Creek’s Moosehead Lake Conservation Easement, Forest Society of Maine, Bangor, ME.
- 1998 – present      Member of Scientific Advisory Committee, JD Irving, LLC, Saint John, New Brunswick, Canada.
- 2009 – present      Reviewer for intensive silviculture of white spruce project, JD Irving, LLC, Saint John, New Brunswick, Canada.
- 2010 – 2012          Museum Board of Directors, Maine Forest and Logging Museum, Bradley,

- ME
- 2010 Expert Reviewer of Nova Scotia's 2010 Natural Resources Strategy reports for the Forest Products Association of Nova Scotia, Truro, NS.
- 2009 Reviewer for Wildlands and Woodlands: A Vision for the New England Landscape, Harvard University.
- 2009 External Assessor for Professor of Silviculture position at Swedish University of Agricultural Sciences in Alnarp, Sweden.
- 2007-09 Atlantica Bioenergy Task Force, A consortium of regional government, industry, federal and regional organizations and post-secondary institutions in the Atlantic Canadian Provinces and Maine that examined opportunities in the area of wood-based BioProducts. The result of this effort was a technical report (<http://www.atlanticbioenergy.com/>)
- 2007-08 Expert witness for Plum Creek Timber's Comprehensive Plan for the Moosehead Lake Region. Written and oral testimony presented to Maine Land Use Regulatory Commission, Augusta, ME.
- 2006 Oral and written testimony to Maine Board of Pesticides Control regarding proposed rule change to Chapter 22, Section 2. B. IV. prohibiting the aerial application of agricultural pesticides. (March 30, 2006)
- 2006 Climate Plan Forest Management Implementation Group, Department of Environmental Protection, Maine State Government, Augusta, ME (Provided 2006 report with recommendations for Maine's Climate Action Plan)
- 2005 Proposal reviewer for Swedish Research Council for Environment, Agricultural Sciences, and Spatial Planning.
- 2004 Reforestation and vegetation management survey development, CanFor, Grande Prairie, Alberta, Canada.
- 2003 Team Leader, Sustainable Forestry Initiative (SFI) Verification Oversight Panel review of Robbins Lumber Company
- 2002 - 2003 Outcome-Based Forestry Panel, Department of Conservation, Maine Forest Service.
- 2002 Panel Member, Managed Ecosystems Program, USDA-CSREES National Research Initiative Competitive Grants Program (NRICGP)
- 2001 Team Leader, Sustainable Forestry Initiative (SFI) Verification Oversight Panel review of Maine Bureau of Parks and Lands
- 2001 Team member, Sustainable Forestry Initiative (SFI) Verification Oversight Panel review of Mead Corp., Maine forestlands
- 2000-08 Sustainable Forestry Initiative (SFI) Verification Oversight Panel. Maine SFI Program



- 1999 – 2003 Forest Biodiversity Information Exchange, Manomet Center for Conservation Sciences, Brunswick, ME.
- 1998 Review of forest vegetation management program for The Pacific Lumber Company, Scotia, CA.
- 1996 Organizing forest science research to better serve Ontario forest industry. Invitation by Ontario Forest Industries Association Board, Toronto, Ontario.
- 1995 - 1998 Referee for the Foundation for Research, Science and Technology, Wellington, NZ on the 1996-98 program on Environmentally Sustainable Management of Forest Vegetation at the New Zealand Forest Research Institute Ltd.
- 1995 - 1996 Scientific reviewer for Weed Science Program of the USDA's National Research Initiative Competitive Grants Program (NRICGP), Washington DC
- 1994-1995 Scientific authority on the development of bialaphos and glufosinate-ammonium as silvicultural herbicides, Canadian Forest Service - Ontario Region, Sault Ste. Marie, Ontario
- 1994 - 1998 Scientific reviewer for National Engineering and Research Council of Canada (NSERC), Ottawa.
- 1994 Review Panel for Canadian Forest Service, Forest Pest Management Institute, Vegetation Management Research Program (Project FP300) for the period 1988-1994. Sault Ste. Marie, Ontario.
- 1992 Expert witness for Ontario Ministry of Natural Resources at Ontario Class Environmental Assessment Hearings. Provided expert testimony on herbicide use, forest vegetation management, and silviculture. Sudbury, Ontario
- 1991 Development of vegetation management research component for federal Green Plan Model Forest proposal from Boise Cascade Canada Ltd., Fort Frances, Ontario.
- 1988 Review of timber growth and yield analysis in the USFS Pacific Northwest Region Draft Environmental Impact Statement on Managing Competing and Unwanted Vegetation
- 1986 Review of forest vegetation management and reforestation practices in the Prince George Forest Region, British Columbia, Canada. Provided 6 one-day training sessions for district personnel and a report for the B.C. Ministry of Forests.
- 1985 Review of forest vegetation management and reforestation practices in the Kamloops Forest Region, British Columbia, Canada. Provided five one-day training sessions and a final report for the B. C. Ministry of Forests.
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**EXTERNAL PROMOTION & TENURE REVIEWS:**

<u>Date</u>	<u>Faculty member</u>	<u>Rank</u>	<u>Institution</u>
August 2013	Dr. Euan Mason	Professor	University of Canterbury
October 2011	Dr. Maher Tadros	Associate Professor	Jordan University of Science
September 2011	Dr. Jose Stape	Tenure	North Carolina State University
September 2010	Dr. Douglass Jacobs	Professor	Purdue University
September 2009	Dr. Kathleen Kavanagh	Professor	University of Idaho
February 2008	Dr. Chris Nowak	Professor	SUNY ESF
September 2007	Dr. Chris Cieszewski	Professor	University of Georgia
November 2006	Dr. Fred Servello	Professor	University of Maine
November 2006	Dr. Carolyn Copenheaver	Associate Professor & Tenure	Virginia Tech
January 2005	Dr. Robert Rose	Professor	Oregon State University
November 2004	Dr. Gary Bradfield	Professor	University of British Columbia
October 2002	Dr. Chris Hawkins	Tenure	U. Northern British Columbia
October 1999	Dr. Andrew Egan	Associate Professor & tenure	University of Maine
May 1997	Dr. Glenn Glover	Associate Professor	Auburn University

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**CONTRIBUTIONS TO SCIENTIFIC JOURNALS:**

*Associate Editor:*

- 2010-Present      Forests (ISSN 1999-4907) Editorial Board. Open Access International and cross-disciplinary scholarly journal of forestry and forest ecology.
- 2007-09            Associate Editor, Canadian Journal of Forest Research
- 1999-00            Guest Associate Editor, Forest Ecology and Management, Special issue for Proceedings of the Second North American Forest Ecology Workshop.
- 1998-99            Guest Co-Editor, Canadian Journal of Forest Research, Special issue for Proceedings of the Third International Conference on Forest Vegetation Management. Volume 29, Number 7, July 1999, pp. 841-1181. ISSN 1208-6037.

*Reviewer:*

Annals of Forest Science  
Canadian Journal of Botany  
Canadian Journal of Forest Research  
Ecology

Ecoscience  
Forestry  
Forest Science  
International Journal of Forest Engineering  
Journal of Forestry  
New Forests  
New Zealand Journal of Forestry Science  
Northern Journal of Applied Forestry  
Restoration Ecology  
Scandinavian Journal of Forest Research  
Western Journal of Applied Forestry

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**INTERNATIONAL SCIENTIFIC ORGANIZATIONS:**

Organizing Committee, Eastern CANUSA Forest Science Conference, Rimouski, Quebec (October 16-18, 2014).

Organizing Committee, Eastern CANUSA Forest Science Conference, Durham, New Hampshire, (November 1-3, 2012).

Scientific Committee for international conference on *Spruce in the Context of Global Climate Change* held August 31-September 3, 2009 in Halmstad, Sweden. Produced special issue of *Scandinavian Journal of Forest Research* on Ecology and Silviculture of Spruce, 2011. 26 (Suppl 11) with 8 articles (96 pp.)

Organizing Committee, Eastern CANUSA Forest Science Conference, Edmunston, New Brunswick, (October 14-16, 2010).

Organizer and Chair, Eastern CANUSA Forest Science Conference, Orono, Maine. (October 17-18, 2008).

Organizing Committee, Eastern CANUSA Forest Science Conference, Quebec, (October 19-21, 2006).

Organizing Committee, Eastern CANUSA Forest Science Conference, Fredericton, New Brunswick (October 15-16, 2004).

Scientific Committee, 5th International Conference on Forest Vegetation Management: Useable Science, Practical Outcomes and Future Needs, A IUFRO Research Group 1.13.00 conference organized by Oregon State University, Corvallis, OR. June 20-24, 2005.

Organizer and Chair, Eastern CANUSA Forest Science Conference, Orono, Maine. (October 19-20, 2002).

International Union of Forest Research Organizations (IUFRO), P1.13.00 Forest Vegetation Management

Coordinator, (1998 - 2002)

Deputy Coordinator, (1996 - 1998)

Scientific Committee, Fourth International Conference on Forest Vegetation Management: Technical, Environmental and Economic Challenges, A IUFRO Research Group 1.13.00 conference organized by INRA Nancy, France. June 17-21, 2002.

Organizing Committee, Second North American Forest Ecology Workshop, Orono, ME, June 27-30, 1999, Society of American Foresters, Forest Ecology Working Group.

Organizer and Co-Chair of Third International Conference on Forest Vegetation Management, Sault Ste. Marie, Ontario. August 24-28, 1998 (177 scientific papers presented from 28 countries).

Organizing Committee, Second International Conference on Forest Vegetation Management, Rotorua, New Zealand. March 20-24, 1995.

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#### NATIONAL SCIENTIFIC AND PROFESSIONAL ORGANIZATIONS:

National Association of University Forest Resources Programs (NAUFRP)

National Extension Chair (2011-2015)

Northeastern Regional Chair (2010-11)

Society of American Foresters (1978 - present)

Maine Division – Chair of Harvest Classification System Task Force 2006; Past-Chair 2006; Division Chair 2005; Chair-Elect 2004.

Oregon Marys Peak Chapter – Chair 1988-89; Chair-Elect 1987-88; Secretary-Treasurer 1986-87.

Canadian Institute of Forestry (1990 - present)

Council Member, Central Ontario Chapter 1992 – 1994

Northeastern Weed Science Society (1991 - 2003)

Chair-elect, Industry, Forestry & Conservation Section (1999-2000)

Chair, Industry, Forestry & Conservation Section (2000-2001)

Weed Science Society of America (1986 - 2003)

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**INVITED PRESENTATIONS, CONTINUING EDUCATION, AND  
TECHNOLOGY TRANSFER:**

**2015:**

Austin Pond Study: Long-term research results and conclusions about vegetation management and thinning in Maine's northern forest. Seven Islands Land Company and Orion Timberlands annual company meeting and field tour (May)

The Spruce Budworm is Back: Maine's Preparation & Response Plan. 2015 NCASI Northern Regional Meeting, Portland, ME (May)

Coming spruce budworm outbreak: Initial risk assessment and preparation & response recommendations for Maine's forestry community. Professional Logging Contractors Association meeting, Augusta, ME (Feb)

They're back: Risk assessment & preparation plan for Maine's coming spruce budworm outbreak. Forestry Noontime Seminar, University of Maine (Feb)

**2014:**

Maine Spruce Budworm Task Force Report. Keeping Maine's Forests Meeting, November 18, 2014, Augusta, ME (Nov)

Maine Spruce Budworm Task Force Report. CFRU 2014 Spruce Budworm Workshop, October 30, 2014, Wells Conference Center, UMaine campus, Orono (Oct)

Principles of vegetation management, FES 408 Silviculture class lecture, U. Maine, Orono, ME (Oct)

Outcome-based Forestry policy implementation. 1-day field tour with Maine Legislature Agriculture, Forestry, and Conservation Committee, JD Irving lands, Presque Isle, ME (Sep)

Austin Pond Study Results and Take-home Lessons. Field tour with Plum Creek Timber forestry staff, Bingham, ME (Aug)

Methods of managing beech-dominated hardwoods stands. 1-day field tour with Seven Islands Land Co. (Jul)

Results from CFRU Thinning Research. Seven Islands Land Company Annual Forestry Meeting. Penobscot Experimental Forest, Bradley, ME (May)

Overview of CFRU Research. Wagner Forest Management Annual Forestry Staff Meeting, Comstock, ME (May)

The Spruce Budworm is Knocking at Our Door Once Again: How is Maine Planning to Answer. Maine Pesticide Recertification Meetings, April 2, 2014, Spectacular Event Center, Bangor, ME and April 3, 2014, Ramada Inn, Lewiston, ME.

Spruce Budworm – Human Response Cycle: How it shaped everything in Maine forestry for the past 40 years. NERCOFE Workshop, University of Maine, Orono, ME. March 10, 2014.

Maine SBW Outbreak Assessment, Preparation & Response Strategy: Wood Supply Impacts. NERCOFE Workshop, University of Maine, Orono, ME. March 10, 2014.

*2013:*

Overview of Center for Sustainable Forests Research. University of Maine Research Center Director's Meeting, Orono. (Dec)

Principles of vegetation management, FES 408 Silviculture class lecture, U. Maine, Orono, ME (Oct)

Spruce Budworm – Human Response Life Cycle: How it shaped everything in Maine forestry for the past 40 years. Forestry Noontime Seminar, School of Forest Resources, University of Maine, Orono. (Oct)

Influence of Partial Harvesting on Hardwood Regeneration. Financially Feasible Hardwood Silviculture: Sustaining a Competitive Hardwood Value Chain, Edmundston, NB. October 1-2, 2013.

Maine Spruce Budworm Strategy Plan. 2013 Maine Forest Products Council, 53rd Annual Meeting, Sugarloaf, ME. September 9, 2013.

Spruce Budworm – Human Response Life Cycle: How it shaped everything in Maine forestry for the past 40 years. 2013 Maine Forest Products Council, 53rd Annual Meeting, Sugarloaf, ME. September 9, 2013.

Importance of Wood & Future Long-term Drivers for Forest Industry. 2013 Maine Forest Products Council, 53rd Annual Meeting, Sugarloaf, ME. September 9, 2013.

*2012:*

Principles of vegetation management, FES 408 Silviculture class lecture, U. Maine, Orono, ME (Oct)

Improving the Composition of Beech-Dominated Northern Hardwood Understories in Northern Maine. Maine Society of American Foresters Fall Meeting, October 9, 2012, Orono, Maine.

Commercial Thinning Research Network: 10-Year Growth & Mortality Patterns. CFRU Forester's Workshop, University of Maine, Orono (May)

Overview of CFRU Research. Plum Creek Annual Forester's Meeting, Greenville, ME. (May)

Overview of Northeast States Research Cooperative (NSRC). North East State Foresters Association Meeting Concord, NH. (May)

Improving the Composition of Beech-Dominated Northern Hardwood Understories in Northern Maine. Pesticide Recertification Meeting, Bangor, ME. (Apr)

*2011:*

Principles of vegetation management, FES 408 Silviculture class lecture, U. Maine, Orono, ME (Oct)

Overview of University of Maine's Cooperative Forestry Research Unit. Maine Legislators Breakfast Meeting, Maine Forest Products Council Forestry Tour, Millinocket, ME – **Invited Presentation** (Oct)

Forty-year results from CFRU Austin Pond Study. 2011 CFRU Fall Field Tour (Oct)

Accomplishments of Northeastern States Research Cooperative, Theme 3. NSRC Program Leaders meeting. Hubbard Brook Experimental Research Station, NH (Oct)

Maine Forests, Forestry, and Emerging Trends. Conservation Forestry's Annual Conference, New England Outdoor Center, Millinocket, ME – **Invited Presentation** (Oct)

Reflections on CIPS Mission, Vision, Goals, Projects, and Strategic Plan. CIPS Steering Committee Meeting, Center for Intensive Planted-forest Silviculture (CIPS), Vancouver, WA – **Invited Presentation** (Aug)

Clune, P., **R.G. Wagner**, R.S. Seymour, and A.R. Weiskittel. Growth and Development of Maine Spruce-fir Forests Following Commercial Thinning (CAFS.10.32). Presentation to National Science Foundation-Center for Advanced Forestry Systems Advisory Board, June 14-16, 2011, Seattle, WA. (Jun)

Weiskittel, A.R., **R.G. Wagner**, and M.B. Russell. Refinement of regional growth and yield models for naturally-regenerated, mixed-species stands in the northeast: Year 2 results. Presentation to National Science Foundation-Center for Advanced Forestry Systems Advisory Board, June 14-16, 2011, Seattle, WA. (Jun)

Importance of Wood and Management of Maine's Forests. The Acadian Internship in Regional Conservation and Stewardship, Schoodic Education and Research Center Institute, Schoodic Point, ME (Jul)

Maine Biomass Feedstock Supply and Challenges. Seven Islands Land Company Tour of Forest Bioproducts Research Institute (FBRI), Thursday, May 19, 2011. Jenness Hall, University of Maine, Orono, ME. (May)

Maine Forest Industry Futures: Strengths, Weaknesses, Opportunities, & Threats. Forest Resources Association, May 5, 2011, Bangor, ME (May)

Steering Committee, Woody Biomass Energy Research Symposium for the Northern Forest, April 28 to 30, 2011 at the University of Vermont, Burlington, VT. (Apr)

School of Forest Resources Curriculum and Center for Research on Sustainable Forests Update. Forest Resources Advisory Committee, March 10, 2011, Augusta, ME, (Mar)

School of Forest Resources and Center for Research on Sustainable Forests Update. Maine Forest Products Council meeting, February 1, 2011, Augusta, ME, (Feb)

Small Woodland Owners Role in Maine's Energy Wood Market. Small Woodland Owners Association of Maine (SWOAM) Day, January 12, 2011, Agricultural Trades Show, Augusta, ME. (Jan)

***2010:***

Proposal to revise undergraduate curriculum for School of Forest Resources. Forestry Noontime Seminar, December 4, 2010, School of Forest Resources, University of Maine, Orono, ME. (Dec)

Biomass and Maine's Forest Industry - Cautious Optimism. Canadian Woodlands Forum, October 20 - 21, 2010; Holiday Inn Hotel & Convention Centre, Truro, Nova Scotia (Oct)

Increasing Biomass Production in Maine Forests? Maine's Bioenergy Marketplace: What You Need to Know. Cooperative Forestry Research Unit 2010 Fall Field Tour, October 7, 2010, McIntire Room, Buchanan Alumni House, The University of Maine, Orono, ME. (Oct)

Principles of vegetation management, FES 408 Silviculture class lecture, U. Maine, Orono, ME (Oct)

Increasing Biomass Production in Maine Forests? Forestry Noontime Seminar, October 1, 2010, School of Forest Resources, University of Maine, Orono, ME. (Oct)

Budworms, Humans, Hares & Lynx: Interactions in the forest and the unforeseen consequences. Dirigo Pines Retirement Community, Orono, ME (Jun)

Increasing Biomass Production in Maine Forests? Maine Nature Conservancy Board, Greenville, ME (Invited Presentation) (Jun)

Increasing Biomass Production in Maine Forests? National Council for Air & Stream Improvement (NCASI) Northern Regional Meeting. May 12-13, 2010, Holiday Inn By the Bay Hotel & Convention Center, Portland, Maine (Invited Presentation and recorded Podcast) (May)

Maine's Commercial Thinning Research Network Study Proposal, National Science Foundation Industry & University Cooperative Research Program (I/UCRC), Center For Advanced Forestry Systems (CAFS). Indianapolis, IN. (Apr)

***2009:***

Maine's State Forest Assessment and Strategies (SFAS), Department of Conservation, Augusta, ME (Dec)

Principles of vegetation management, FES 408 Silviculture class lecture, U. Maine, Orono, ME (Oct)

Maine Forest Products Council Legislators Tour. Summary of CFRU research accomplishments in management of northern forest stands. Millinocket, ME (Oct)

Organizer and Moderator, Latest Forest Biorefineries Technologies. New England Foresters Society of American, 89th Winter Meeting, Bio: Mass, Fuel, Products, Diversity Resource Management in a Changing World, March 17-20, 2009, Portland, Maine.

***2008:***



Silviculture research tour of long-term studies on Penobscot Experimental Forest, Project Learning Tree Workshop for Maine high school teachers, August 14, 2008, Orono, ME (Aug).

Latest research in forest management and forest bioproducts, Project Learning Tree Workshop for Maine high school teachers, August 12, 2008, Orono, ME (Aug).

Sustainability of a Maine Forest Bioenergy/Bioproducts Industry?, Gravure Association of America Environmental Workshop, June 17-19, 2008, Atlantic Oakes Resort, Bar Harbor, ME. (Jun)

Forest Bioproducts Initiative Update, Board of Advisors, Maine Forest Products Council, Augusta, ME. (May)

Maine Forest Service harvest Classification System, Board of Advisors, Maine Forest Products Council, Augusta, ME. (May)

Improving Species Composition of Hardwood Regeneration in Beech-Dominated Understories: First-Year Results. CFRU Research Workshop, May 14, 2008, Brewer, ME (May)

Maine Forest Service Multi-Resource Harvest Assessment: Silvicultural Outcomes Component. CFRU Research Workshop, May 14, 2008, Brewer, ME (May)

Principles of Vegetative Competition in Young Forest Stands. Conference on Sustainable Forests: The Role of Vegetation Management with Herbicide, April 10 - 11, 2008, Hilton Garden Inn, Saskatoon, SK (Invited Keynote) (Apr)

The Role of Vegetation Management for Increasing Productivity and Conservation of the World's Forests. Conference on Sustainable Forests: The Role of Vegetation Management with Herbicide, April 10 - 11, 2008, Hilton Garden Inn, Saskatoon, SK (Apr)

Sustainability, Economic Viability, and Social Acceptability of a Forest Bioproducts Industry in Maine, Northern Forest Forum, Maine Division of Society of American Foresters, Caribou, ME (Apr)

Sustainability of a Maine Forest Bioproducts Industry?, Project Learning Tree Training Session, Schoodic Point, ME (Mar)

Overview of CFRU, Center for Advanced Forestry Systems Annual Meeting, Portland, OR (Feb)

Sustainability, Economic Viability, and Social Acceptability of a Forest Bioproducts Industry in Maine, Northern Forest Alliance meeting, Augusta, ME (Jan)

### *2007:*

Maine Forests, Their Management, and Biomass Potential. Project Learning Tree Workshop for High School Science Teachers, Maine Audubon Nature Center, Falmouth, ME (Nov)

Latest results from CFRU Commercial Thinning Research Network and Acadian Forest Ecosystem Research Program. Maine Forest Service foresters field tour, Penobscot Experimental Forest, Bradley,

ME (Nov)

Principles of vegetation management, FES 408 Silviculture class lecture, U. Maine, Orono, ME (Nov)

Latest research results from University of Maine's Cooperative Forestry Research Unit. Forest Resources Association, Brewer, ME (Oct)

Overview of University of Maine's Cooperative Forestry Research Unit. University of North Carolina and Virginia Tech Forest Nutrition Cooperative, 2007 Annual Meeting of Advisory Board, Blacksburg, VA. October 18-20, 2007 (Oct)

Overview of University of Maine's Forest BioProducts Research Initiative. Ensuring Forest Sustainability in the Development of Wood-Based Bioenergy: A National Dialogue. Pinchot Institute for Conservation. Pocantico Conference Center, Tarrytown, New York. September 17-19, 2007. (Sep)

Linking dynamic forest ecosystems with societal demands for products and environmental protection: Overview of FBRI Theme 1. AAAS panel review. University of Maine, Orono, ME (Aug)

Maine Forests, Their Management, and Biomass Potential. Project Learning Tree Workshop for High School Science Teachers, University of Southern Maine, Gorham, ME (Feb)

Cooperative Forestry Research Unit Overview. Joint Standing Committee on Agriculture, Conservation and Forestry, Maine Legislature, (Jan)

Herbicides in Christmas Tree Culture: Environmental Fate & Toxicity. Maine Christmas Tree Association Annual Meeting and pesticide re-certification training, Maine Agriculture Trade Show, Augusta Civic Center, Augusta, ME (Jan)

*2006:*

Principles of vegetation management, FES 408 Silviculture class lecture, U. Maine, Orono, ME (Nov)

Maine Forest Harvest Classification System: Task Force Report. Maine Society of American Foresters, Fall meeting, October 10, 2006, Orono, Maine.

What is CFRU? Research, Results and the Resource: A Workshop For CFRU Member Foresters, Orono, Maine. (May)

Cooperative Forestry Research Unit: What's in it for forest landowners? Wagner Forest Management Annual Meeting, Bethel, ME (May)

Opportunities and Challenges for Maine's Forest Landowners, UMaine "Paper Days" Symposium, University of Maine, Orono (Apr)

Opportunities and Challenges For Maine's Forest Landowners in Coming BioProducts Market, Science & Technology for the Future of Maine's Forest-based Economy, University of Maine, Orono (Mar)

*2005:*

Sustainable wood supply in a dynamic world: Where have we been, where are we going, and what do we need to know? Workshop on The Art and Science of Wood Supply Estimation, Ontario Ministry of Natural Resources, Sault Ste. Marie, Ontario (Dec) - Invited keynote presentation

Principles of vegetation management, FES 408 Silviculture class lecture, U. Maine, Orono, ME (Oct)

Organizer and Moderator - Hardwood Markets and the Silviculture Needed To Get There New England, Special session at New England Society of American Foresters, 85th Annual Meeting, Portland, ME. March 16-18, 2005

Role of herbicides in forest management, St. Francis, Maine town meeting to vote on a resolution to prohibit aerial and ground application of herbicides for forestry purposes (Apr)

Herbicides: Mode of Action & Environmental Fate, Maine Christmas Tree Growers Association Annual Meeting, Augusta Civic Center. (Jan)

### *2004:*

Cooperative Forestry Research Unit: What's New for 2004? Plum Creek Timber Company Annual Meeting, Fairfield, ME. (Dec)

Update on University of Maine Research on Sustainable Forests, CFRU, and EPSCoR Bioproducts initiative. University of Maine Forest Resources Advisory Committee. (Dec)

Principles of vegetation management, FES 408 Silviculture class lecture, U. Maine, Orono, ME (Oct)

Development of a Commission for Research and Education on Sustainable Forestry in Maine.

- Governor's staff, Augusta, ME. (Jun)
- Small Woodland Owners of Maine Executive Board, Augusta, ME. (Mar)
- Maine Farm Bureau, Augusta, ME. (Mar)
- CFRU Advisory Committee meeting, Orono, ME (Jan)

Do Silvicultural Investments in Young Stands Pay Off Over the Long Term? Maine Agricultural Trades Show, Small Woodland Owners of Maine session, Augusta, ME (Jan)

### *2003:*

Cooperative Forestry Research Unit (Poster presentation). Blaine House Conference on Natural Resource Based Industries (Nov)

Principles of vegetation management, FES 408 Silviculture class lecture, U. Maine, Orono, ME (Oct)

Oregon Forest Oregon Forest Products Harvest Tax. Second Summit on the Future of Industry-Sponsored Research on Forestry Issues at the University of Maine. Orono, ME (Aug)

Overview of CFRU research. Plum Creek, Fairfield, ME (Aug)

Accomplishments, current status, and trends of Cooperative Forestry Research Unit. Summit on Industry-Sponsored Research at the University of Maine, Orono, ME (May)

Summary of CFRU conifer tolerance study using Arsenal for release. UAP Timberland LLC – Dow Agrosiences Forestry / Pesticide Recertification Meeting. Bangor, ME (May)

Overview of CFRU research program. Cooperative State Research, Extension, and Education Service review of University of Maine forest research program, Orono, ME (Apr)

Overview and CFRU research update. International Paper Co. annual forest management meeting, Skowhegan, ME (Apr)

Mode of action and fate of herbicides in the environment. Rights-of-Way Pesticide Recertification Workshop. University of Maine Cooperative Extension. Pest Management Office. Houlton and Lewiston, ME (Apr)

Long-term effects of herbicide treatments and pre-commercial thinning on stand development in spruce-fir stands of Maine: Final results from Austin Pond Study. CFRU Advisory Committee meeting, Orono, ME (Jan)

### *2002:*

NEON: Opportunity for The University of Maine?, NSFA College Committee of Five, U. Maine, Orono, ME (Nov)

Trends in Forest Industry-Sponsored Research at The University of Maine, Forest Research Advisory Committee, U. Maine, Orono, ME (Nov)

Principles of vegetation management, FES 408 Silviculture class lecture, U. Maine, Orono, ME (Oct)

Vegetation management practices and long-term results from the Austin Pond study, FES 508 Industrial Spruce-Fir Ecosystem class lecture, U. Maine, Orono, ME (Oct)

Research Updates: CFRU Advisory Committee meeting (May)

- Commercial Thinning Research Network
- Hardwood silviculture research proposals
- Eastern CANUSA Forest Science Conference

Long-Term Value of Silvicultural Investments in Young Stands: Latest Results From Maine Research. Annual Foresters Meeting, J.D. Irving, Inc., Fredericton, New Brunswick. (Apr)

Long-Term Value of Silvicultural Investments in Young Stands: Latest Results From Maine Research. Sylvicon 2002 Conference, New Brunswick Association of Professional Foresters, Fredericton, New Brunswick. (Feb)

Research Updates: CFRU Advisory Committee meeting (Jan)

- Factors affecting commercial thinning in a model of Maine's future wood supply
- Hardwood silviculture research
- Eastern CANUSA Forest Science Conference

2001:

Public perceptions of forestry practices: A trust and risk communication challenge, New England Society of American Foresters, Maine Division Annual Meeting - Forestry in Maine: Improving public perception and communication conference, Black Bear Inn, Orono, ME (Dec)

Principles of vegetation management, FES 408 Silviculture class lecture, U. Maine, Orono, ME (Oct)

Commercial Thinning Research Network update, CFRU Annual Field Tour, (Oct)

Ecological effects of expanding gap silvicultural systems: Tour of FERP. World Forestry Center Board of Directors, Portland, Oregon (Sep)

Overview of CFRU research, Milliken family meeting on Baskahegan land management, Southwest Harbor, ME (Aug)

Research Updates: U. Maine Forest Research Advisory Committee (May)

- Outcome-based forestry legislation
- Eastern CANUSA Forest Science Conference

Research on commercial thinning using single-grip harvesters. Wagner Forest Management, Ltd. Workshop, Bangor, ME (May)

Research Updates: CFRU Advisory Committee meeting (May)

- Wood supply/silviculture research priorities report
- Hardwood Silviculture Research Subcommittee
- Eastern CANUSA Forest Science Conference

Assessing silviculture research priorities using wood supply analysis. Forestry Noontime Seminar, University of Maine, Orono, ME (May)

The Maine Forest Service's proposed outcome-based forestry pilot project. Forest Resources Advisory Committee, University of Maine, Orono, ME (Apr)

Testimony in support of Outcome-Based Forestry legislation to Maine State Legislative Agriculture and Forestry Committee (Apr)

Competition thresholds, Arsenal damage to spruce and fir, and Austin Pond update. International Paper Pesticide Training Session, Bangor, ME (Apr)

Public Perceptions of Forestry Practices: A Trust and Risk Communication Challenge, J.D. Irving Limited Science Forum: Using Science To Improve Business, Hugh John Fleming Forestry Complex, Fredericton, New Brunswick (Apr)

Forest vegetation management: Principles and practice. Instructor for ½-day session, Module II: Silviculture Regeneration Principles, Alberta Advanced Forest Management Institute, Hinton, Alberta (Feb)

Research Updates: CFRU Advisory Committee meeting (Jan)

- Austin Pond study
- Arsenal herbicide damage to spruce and fir
- Commercial Thinning Research Network
- Hardwood Silviculture Research Committee

Overview of CFRU.JDI Scientific Advisory Committee. Fredericton, NB (Jan)

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*2000:*

Keynote address: The public's perception of risk and trust. 4<sup>th</sup> Annual PNW-IVMA Forestry and Rights-of-Way Conference. Integrated Vegetation Management Conference. The Forces of Change: the Power and Politics of Vegetation Management. PNW-Integrated Vegetation Management Association, November 14-15, 2000, Portland, OR. (Nov)

Panel debate: Ecology and Politics of Maine's Forests: The 2000 Maine Forestry Referendum. Bates College, Muskie Archives, Lewiston, ME (Nov)

Panel debate: Maine's Forestry Referendum. University of Maine, Fort Kent, ME (Oct)

Keynote Address: Public perceptions of risk from using pesticides. Joint Meeting of the 18<sup>th</sup> Eastern Spruce Budworm Research Work Conference and Spray Efficacy Research Group. Oct 29-Nov 2, 2000. Fredericton, New Brunswick. (Oct)

Scientific basis and implications for ballot question #2. Forestry noontime seminar series, University of Maine, Orono, ME (Oct)

Vegetation management practices and long-term results from the Austin Pond study, FES 508 Industrial Spruce-Fir Ecosystem class lecture, U. Maine, Orono, ME (Oct)

Principles of vegetation management, FES 408 Silviculture class lecture, U. Maine, Orono, ME (Oct)

Research Updates: CFRU Advisory Committee meeting (Oct)

- Commercial Thinning
- Hardwood Research Committee
- Cooperating Scientists

Organizer and Moderator. Forestry and the Riparian Zone, Forest Ecosystem Information Exchange, October 26, 2000, Wells Commons, Orono, ME (Oct)

Organizer and Moderator. Greenbacks and Green Goals: Economics and Environmental Forestry, Forest Ecosystem Information Exchange, May 4, 2000, Wells Commons, Orono, ME (May)

Research Update: CFRU Advisory Committee meeting (May)

- Hiring
- Proposed new dues structure
- Revised 5-Year Objectives
- Approval of Prospectus

- Carter referendum white paper
- Wood supply project update
- Commercial thinning Phase I & II update
- Herbicide tolerance study: 1 year Arsenal effects
- Herbicide Tank Mix Toxicology Project Update

Conifer tolerance to herbicides. Pesticide Applicator Recertification Training, University of Maine Cooperative Extension, Pest Management Office, Brewer, ME. (Apr)

Forest vegetation management: Principles and practice. Instructor for ½-day session, Module II: Silviculture - Regeneration, Alberta Advanced Forest Management Institute, Hinton, Alberta (Feb)

Research Update: CFRU Advisory Committee meeting (Feb)

- Prospectus
- Commercial thinning project
- Herbicide tank mix project update
- Past and future CFRU budgets
- U. Maine overhead on external project funding
- Hiring update
- Maine / New Brunswick meeting
- Thinning conference
- Wood supply analysis project
- Hardwood Site Guide

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*1999:*

The role of vegetation management in increasing forest productivity. Forestry Seminar Series, University of Maine, Orono. (Nov)

Program Chair and Organizer, Thinning in the Maine Forest Conference, Augusta, ME, November 15-16, 1999, Cooperative Forestry Research Unit, U. Maine. (Nov)

Research Update: CFRU Advisory Committee meeting (Oct)

- CFRU re-structuring
- Research priority survey results
- Interactive effects of herbicide tank mixes on aquatic ecosystems
- Maine Commercial Thinning Research Network
- FY99-00 CFRU budget
- Organizer - Bartlett Experimental Forest Tour

Organizer and Moderator. Managing Forested Landscapes, Forest Ecosystem Information Exchange, October 29, 1999, Black Bear Inn, Old Town, ME (Oct)

Vegetation management with herbicides, FES 408 Silviculture class lecture, U. Maine, Orono, ME (Oct)

Research Update: CFRU Advisory Committee meeting (Jul)

- Research priorities survey
- CFRU re-structuring

- Austin Pond 2000 Plus project
- Seasonal tolerance of spruce and fir to herbicides
- Silviculture research priorities / wood supply model status
- Herbicide tank mixtures and aquatic toxicology
- Public perceptions of forestry practices study
- Maine thinning conference
- Commercial thinning project

The effects of herbicides and other methods of vegetation management on forest succession and forest ecosystems. Maine Audubon Society, Dover-Foxcroft, ME. (Jun)

Tour guide. Hardwood Management Conference, U. Maine Saunders Chair, Bethel, ME. (Jun)

Moderator: Panel discussion with forest manager and private landowner on logging aesthetics. Logging Aesthetics Workshop, SFI Education Committee, Casco, ME. (May)

Silvicultural strategies for the future: How can forest managers increase wood supply and wood quality while meeting ecological goals and public expectations? J.D. Irving Science Forum, Fredericton, New Brunswick (Apr)

Seasonal injury to red spruce and balsam fir by glyphosate, triclopyr, and imazapyr. Pesticide Recertification Meeting, Timberland Enterprises, Bangor, ME. (Apr)

Critical period of competition for herbaceous vegetation in young conifer plantations. Pesticide Recertification Meeting, Timberland Enterprises, Bangor, ME. (Apr)

Public perceptions of forestry practices: a trust and risk communication challenge. Dept. of For. Eco. Sys. Sci. seminar series, U. Maine, Orono. (Jan)

CFRU silviculture research proposals and emerging forestry issues update. CFRU Advisory Comm. Meeting. Orono, ME (Jan)

Public perceptions of forestry practices: a trust and risk communication challenge. Dept. of For. Eco. Sys. Sci. seminar series, U. Maine, Orono. (Jan)

Forest vegetation management: Principles and practice. Instructor for ½-day session, Module II: Silviculture - Regeneration, Alberta Advanced Forest Management Institute, Hinton, Alberta (Jan)

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*1998:*

Public perceptions of risk of forest vegetation management practices: Implications for intensive silviculture. Champion International Corporate meeting, Stone Mountain, GA (Nov).

The role of herbicides in intensive silviculture. Interview for Champion International video (Oct).

Principles of forest vegetation management. (FES 508) The industrial spruce-fir ecosystem class (3 hour lecture), U. Maine, Orono (Oct).



Acceptable practices in forestry: Differences between the public and forestry professionals. Second Annual Maine Forest Education Conference, Augusta, ME (Oct).

Proposed framework for CFRU silviculture research. CFRU Advisory Committee meeting, Grand Falls, New Brunswick (Oct).

Conifer tolerance to herbicides: preliminary study results. CFRU Advisory Committee meeting, Grand Falls, New Brunswick (Oct).

Technical support for tour on aerial herbicides in the north country industrial forests for New Hampshire state legislators and regulators, sponsored by Champion International and Mead Paper Corporation (Sep).

PEF tour host, Small Woodland Owners Association of Maine, Third Annual Forestry Fair, (Sep).

Radio and TV interviews - National Canadian Broadcasting Corporation (CBC), 12 live interviews from coast to coast regarding international advances in forest vegetation management, spoke as leader and organizer of Third International Conference on Forest Vegetation Management in Sault Ste. Marie, Ontario. Also MCTV live television interview about conference. (Aug)

PEF tour host for Maine Forest Products Council / Maine Tree Foundation Teacher's Tour. (Jul)

Public perceptions of risk and acceptability of vegetation management methods. Atlantic Vegetation Management Association, Fredericton, NB. (Jul)

Effects of plant competition on tree growth and survival. Maine Christmas Tree Growers summer meeting, Bucksport, ME. (Jul)

Advances in vegetation management research in Ontario. CFRU Advisory Committee meeting, University of Maine, Orono. (Apr)

Critical period for herbaceous vegetation control in northern conifers. CFRU Advisory Committee meeting, University of Maine, Orono. (Apr)

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*1997:*

Principles of vegetation management and non-chemical methods. Instructor for ½-day session, Module II: Silviculture Systems, Alberta Advanced Forest Management Institute, Hinton, Alberta.

Perspectives on the future of forest vegetation management. After dinner speech, Module II: Silviculture Systems, AAFMI Program, Hinton, Alberta.

Differences in perceptions and attitudes between Ontario's public and forestry professionals about forest management. Managing boreal ecosystems: innovative solutions and tools, Canadian Institute of Forestry, Timmins, Ontario.

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*1996:*

Instructor, Vegetation Management, Module IV, Integrated Forest Management Course, BioForest Technologies, Inc., Fredericton, New Brunswick. Lectures presented include:

- Introduction of vegetation management,
- Effects of plant competition on forest trees,
- Principles of plant autecology and preventing vegetation management problems,
- Vegetation management alternatives.
- Public perceptions of risk and attitudes toward forest vegetation management

Vegetation Management Strategies Workshop, Northeast Science and Technology Unit, Wawa, Ontario. Lectures presented include:

- Current Issues in Vegetation Management.
- Competitive interactions among forest plants
- Alternative approaches to managing forest vegetation
- Advances in biological methods of vegetation control

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*1995:*

Data requirements for decisions in forest vegetation management. National Workshop on Remote Sensing in Forest Vegetation Management, Canadian Forest Service, Ontario Ministry of Natural Resources, and Abitibi-Price, Sault Ste. Marie, Ontario.

Public and forestry professional attitudes towards forest management in Ontario. Ontario Forest Research Institute lecture series, Sault Ste. Marie, Ontario.

Principles of forest vegetation management. Forest pest management class, University of Toronto, Ontario.

Instructor and organizer of Vegetation Management Module IV. Fourth Annual Advanced Forest Herbicides Course. Forest Pest Management Institute and Ontario Ministry of Natural Resources. Thunder Bay, Ontario. Lectures presented include:

- Introduction of vegetation management,
- Effects of plant competition on forest trees,
- Principles of plant autecology and preventing vegetation management problems,
- Vegetation management alternatives.
- Public perceptions of risk and attitudes toward forest vegetation management

Attitudes toward herbicide use in forestry. Canadian Forest Nursery Weed Management Association & Alternative Biological Chemical Management Group, Annual Meeting, Edmonton, Alberta.

Public and forestry professional attitudes, values, and perceptions of risk about forest vegetation management. Ontario Vegetation Management Association, Annual Meeting, Guelph, Ontario.

Integrated forest vegetation management. Vegetation Management in the Great Lakes-St. Lawrence Forest Region Conference. Central Region Science and Technology Unit, Dorset, Ontario.

Critical-period thresholds for northern conifers. Vegetation Management in the Great Lakes-St. Lawrence Forest Region Conference. Central Region Science and Technology Unit, Dorset, Ontario.

Organizing committee for conference and moderator of sessions on decision-support systems, training, and regulation, Second International Forest Vegetation Management Conference, April 20-24, 1995, Rotorua, New Zealand.

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*1994:*

Impact of competing vegetation on forest stands. Integrated Forest Pest Management Course, Canadian Forest Service, Forest Pest Management Institute, Sault Ste. Marie, Ontario.

Vegetation management alternatives for competition release. Integrated Forest Pest Management Course, Canadian Forest Service, Forest Pest Management Institute, Sault Ste. Marie, Ontario.

Practical development of decision-support systems for vegetation management. Integrated Forest Pest Management Course, Canadian Forest Service, Forest Pest Management Institute, Sault Ste. Marie, Ontario.

Instructor and organizer of Vegetation Management Module IV. Third Annual Advanced Forest Herbicides Course. University of Guelph, Forest Pest Management Institute, and Ontario Ministry of Natural Resources. Sault Ste. Marie, Ontario. Lectures presented include:

- Use of herbicides in integrated forest vegetation management
- Introduction of vegetation management,
- Effects of plant competition on forest trees,
- Principles of plant autecology and preventing vegetation management problems,
- Vegetation management alternatives.

Alternatives for vegetation management. First Nations Workshop: Working Together. Timmins, Ontario.

Inter- and intra-specific competition in regulating plant populations. Ontario Advanced Forestry Program, Module I. Lakehead University, Thunder Bay, Ontario.

Release treatment options. Vegetation Management Strategies Workshop, Northeast Science and Technology Unit, Kirkland Lake, Ontario.

Plant interactions. Vegetation Management Strategies Workshop, Northeast Science and Technology Unit, Kirkland Lake, Ontario.

Current issues in forest vegetation management. Vegetation Management Strategies Workshop, Northeast Science and Technology Unit, Kirkland Lake, Ontario.

Forest vegetation management research advances in Ontario. National Forest Vegetation Management Research Workshop, Forest Pest Management Institute, Canadian Forest Service, Sault St. Marie, Ontario.

Research accomplishments of the Vegetation Management Alternatives Program. Agricultural Research Institute of Ontario Board meeting, University of Guelph, Guelph, Ontario.

Plant interactions. Vegetation Management Strategies Workshop, Northeast Science and Technology

Unit, Timmins, Ontario.

Current issues in forest vegetation management. Vegetation Management Strategies Workshop, Northeast Science and Technology Unit, Timmins, Ontario.

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*1993:*

Progress of Vegetation Management Alternatives Program (VMAP). Canadian Forest Service, Green Plan Research Network Review on Integrated Forest Pest Management, Sault Ste. Marie, Ontario.

Forest Vegetation Management and Ontario's search for Alternatives to Herbicides. Northwatch Fall meeting, Espanola, Ontario.

Progress of Vegetation Management Alternatives Program (VMAP). 17th Annual Pest Review, Forestry Canada, Sault Ste. Marie, Ontario.

Instructor and organizer of Vegetation Management Module IV. Second Annual Advanced Forest Herbicides Course. University of Guelph, Forest Pest Management Institute, and Ontario Ministry of Natural Resources, Sault Ste. Marie, Ontario. Lectures presented include:

- Introduction of vegetation management,
- Effects of plant competition on forest trees,
- Principles of plant autecology and preventing vegetation management problems,
- Vegetation management alternatives.

Overview of the Vegetation Management Alternatives Program (VMAP). Forest Vegetation Management Alternatives Workshop, Chapleau, Ontario.

Biological methods of forest vegetation control. Forest Vegetation Management Alternatives Workshop, Chapleau, Ontario.

Inter- and intra-specific competition in regulating plant populations. Ontario Advanced Forestry Program, Module I. Lakehead University, Thunder Bay, Ontario.

Effects of plant competition on forest trees. Project Supervisors Workshop, Ontario Ministry of Natural Resources, Sault Ste. Marie, Ontario.

Overview of the Vegetation Management Alternatives Program (VMAP). University of Minnesota, Cloquet Forestry Center, Cloquet, MN.

Effects of woody and herbaceous vegetation competition on forest trees. Stand Tending Workshop, Forestry Canada and Alberta Forest Service, Edmonton, Alberta.

Overview of Ontario stand tending experiences and treatments. Stand Tending Workshop, Forestry Canada and Alberta Forest Service, Edmonton, Alberta.

Introduction to the Vegetation Management Alternatives Program (VMAP). Vegetation Management Alternatives Workshop, Southern Ontario Science and Technology Transfer Unit, Keene, Ontario.

Comparison of vegetation management tools. Forest Vegetation Management Workshop, Oregon State University, Corvallis, OR.

Trends in vegetation management in North America. Forest Vegetation Management Workshop, Oregon State University, Corvallis, OR.

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*1992:*

Principles of forest vegetation management. Forest pest management class, University of Toronto, Ontario.

Overview of the Vegetation Management Alternatives Program (VMAP). Federation of Ontario Naturalists, Don Mills, Ontario.

Overview of the Vegetation Management Alternatives Program (VMAP). Fisheries & Wildlife Branch meeting, Ministry of Natural Resources, Maple, Ontario.

Overview of the Vegetation Management Alternatives Program (VMAP). Sierra Club of Eastern Canada meeting, Toronto, Ontario.

Overview of the Vegetation Management Alternatives Program (VMAP). Canadian Institute of Forestry meeting, Sault Ste. Marie, Ontario.

Principles of vegetation management in forestry. E.B. Eddy Forest Advisory Committee meeting. Sudbury, Ontario.

Overview of the Vegetation Management Alternatives Program (VMAP). 16th Annual Pest Review, Forestry Canada, Sault Ste. Marie, Ontario.

Research accomplishments of the Vegetation Management Alternatives Program (VMAP). Agricultural Research Institute of Ontario Board meeting, Toronto, Ontario.

Ontario's search for alternatives to herbicides. World Congress for Education and Communication on Environment and Development, The United Nations Educational, Scientific and Cultural Organization (UNESCO). Toronto, Ontario.

Instructor and organizer of Vegetation Management Module IV. First Annual Advanced Forest Herbicides Course. University of Guelph, Forest Pest Management Institute, and Ontario Ministry of Natural Resources, Sault Ste. Marie, Ontario. Lectures presented include:

- Introduction of vegetation management,
- Effects of plant competition on forest trees,
- Principles of plant autecology and preventing vegetation management problems,
- Vegetation management alternatives.

Ontario's search for alternatives to herbicides. Ontario government central agency tour, Wakami Lake Provincial Park, Ontario.

Vegetation Management Alternatives Program. Presentation to OMNR Northeastern Region, Timmins,

Ontario.

Vegetation Management Alternatives Program. Presentation to OMNR Central Region, North Bay, Ontario.

Vegetation management in Ontario: herbicides and alternatives. Canadian Institute of Forestry, Lake of the Woods Section, Kenora, Ontario.

Trends and principles guiding the future of forest vegetation management. Vegetation management on mixedwood sites for the practitioner: A practical workshop. Forestry Canada, Prince Albert National Park, Waskesiu, Saskatchewan.

Instructor for Planning a Vegetation Management Strategy Workshop, Northwestern Ontario Forest Technology Development Unit, Dryden, Ontario. Lectures presented include:

- Integrating plant autecology and silvicultural activities to prevent problems,
- Competition thresholds: principles of plant competition,
- Future directions for vegetation management.

Inter- and intra-specific competition in regulating plant populations. Ontario Advanced Forestry Program, Module I. Lakehead University, Thunder Bay, Ontario.

Principles of plant competition in forest vegetation management: what have we learned from research? Ontario Advanced Forestry Program, Module IV. Lakehead University, Thunder Bay, Ontario.

Alternative forest vegetation management practices. Ontario Advanced Forestry Program, Module IV. Lakehead University, Thunder Bay, Ontario.

Vegetation management alternatives. Spray Application Technology Seminar. Northern Interior Vegetation Management Association. Prince George, British Columbia.

Weed control thresholds for forestry. Spray Application Technology Seminar. Northern Interior Vegetation Management Association. Prince George, British Columbia.

Alternatives to herbicides in vegetation management. Sixth Annual Operational Efficiency Seminar. Nova Scotia Silviculture Contractors Association. Truro, Nova Scotia.

Research directions to advance forest vegetation management in North America. Forest Research Institute, Rotorua, New Zealand.

Modeling/sampling and plant autecology session moderator. International Conference on Forest Vegetation Management, Auburn, Alabama.

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*1991:*

What forester's believe about forest vegetation management. meeting with the Teme-Augama Anishinabai, Temagami, Ontario.

Forest vegetation management in North America. undergraduate silviculture class. University of Toronto,

Ontario.

Inter- and intra-specific competition in regulating plant populations. Ontario Advanced Forestry Program, Module I. Lakehead University, Thunder Bay, Ontario.

Directions for forest vegetation management in Ontario. Planning Vegetation Management Strategies Workshop, NW Ontario Forest Technology Development Unit, Thunder Bay, Ontario.

Principles of competition in forest vegetation management. Planning Vegetation Management Strategies Workshop, NW Ontario Forest Technology Development Unit, Thunder Bay, Ontario.

Directions for forest vegetation management in Ontario. Planning Vegetation Management Strategies Workshop, NW Ontario Forest Technology Development Unit, Dryden, Ontario.

Principles of competition in forest vegetation management. Planning Vegetation Management Strategies Workshop, NW Ontario Forest Technology Development Unit, Dryden, Ontario.

Integrating plant autecology and silvicultural activities to prevent vegetation management problems. Planning Vegetation Management Strategies Workshop NW Ontario Forest Technology Development Unit, Dryden, Ontario.

Directions for forest vegetation management in Ontario. Vegetation Management for the 90s Conference, Northern Forest Development Group and Canadian Institute of Forestry workshop, Timmins, Ontario.

Principles of competition in vegetation management. Vegetation Management for the 90s Conference, Northern Forest Development Group and Canadian Institute of Forestry workshop, Timmins, Ontario.

Reducing the need for vegetation management. Vegetation Management for the 90s Conference, Northern Forest Development Group and Canadian Institute of Forestry workshop, Timmins, Ontario.

The direction of forest vegetation management in Ontario in the 1990's. Ontario Advanced Forestry Program, Module IV. Lakehead University, Thunder Bay, Ontario.

Operational tending and competition in Ontario. Ontario Advanced Forestry Program, Module IV. Lakehead University, Thunder Bay, Ontario.

The toxicity and environmental safety of herbicides. Ontario Advanced Forestry Program, Module IV. Lakehead University, Thunder Bay, Ontario.

The combined effects of forest fertilization and weed control on young forest stands. Ontario Advanced Forestry Program, Module IV. Lakehead University, Thunder Bay, Ontario.

Forest vegetation management in North America. undergraduate silviculture class. University of Toronto, Ontario.

Attributes of successful forestry research cooperatives. Northern Interior Vegetation Management Association Annual Meeting. Prince George, British Columbia.

A Canadian perspective on vegetation management. Northern Interior Vegetation Management

Association Annual Meeting. Prince George, British Columbia.

Surveys techniques for forest vegetation management decisions. Northern Interior Vegetation Management Association Annual Meeting. Prince George, British Columbia.

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*1990:*

Forest vegetation management in Ontario. Graduate entomology class. University of Toronto, Ontario.

Integrating plant autecology and silvicultural activities to prevent forest vegetation management problems. Recent Advances in Pest Management Symposium. Sault Ste. Marie, Ontario.

Population regulation: Intraspecific competition and other intraspecific relations. Ontario Advanced Forestry Program, Module I. Lakehead University, Thunder Bay, Ontario.

Principles of forest vegetation management. Silviculture Prescription Workshop. Northern Technology Development Unit, Timmins, Ontario.

Where vegetation management fits into forest management. OMNR town meeting, Sioux Lookout, Ontario.

Principles of competition used in assessing the need for treatment. Planning Vegetation Management Strategies Workshop. NW Ontario Forest Technology Development Unit, Thunder Bay, Ontario.

Selecting appropriate treatments for the situation. Planning Vegetation Management Strategies Workshop. NW Ontario Forest Technology Development Unit, Thunder Bay, Ontario.

Herbicides in forestry. OMNR Herbicide Application Boss Course, Thunder Bay, Ontario.

Forest vegetation management: Where have we been and where are we going? Petawawa Forest Research Institute, Petawawa, Ontario.

Forest vegetation management: Where have we been and where are we going? Ministry of Natural Resources, science and technology seminar series. Sault Ste. Marie, Ontario.

The influence of woody and herbaceous vegetation on conifer survival and growth. Potlatch Corporation, Lewiston, ID.

Forest vegetation management: Where have we been and where are we going? Graduate forest science seminar series, Oregon State University, Corvallis, OR.

Forest vegetation management in North America. Graduate silviculture class. University of Toronto, Ontario.

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*1989:*

Environmental resources for early stand establishment. Silviculture Institute Module II, Integrated forest ecosystems. Oregon State University, Corvallis.



Effects of competition from salmonberry and ICIPS computer model demonstration. Silvicultural studies field trip, Siuslaw National Forest, Hebo, OR.

An expert system for forest weed management. Weed Management Strategies Course, International Plant Protection Center, Oregon State University, Corvallis, OR.

Competition in light-limited environments. Northern Rocky Mountain Stand Management Council and Inland Empire Vegetation Management Working Group. Missoula, MT.

Vegetation management and reforestation success. Forest Regeneration and site Preparation Course. University of Idaho, Moscow, ID.

An introduction to forest vegetation management tools and techniques. Forest Vegetation Management Workshop, Forestry Extension, Oregon State University, Corvallis, OR

A new computer simulator for Douglas-fir and bigleaf maple interactions in the Pacific Northwest. Forest Vegetation Management Workshop, Forestry Extension, Oregon State University, Corvallis, OR

Introduction to computer-based tools in vegetation management. Forest Vegetation Management Workshop, Forestry Extension, Oregon State University, Corvallis, OR

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*1988:*

Advances in forest vegetation management research. Boise Cascade Corporation, Monmouth, OR

Recent advances in forest vegetation management. Advances in Reforestation Technology, Society of American Foresters, Roseburg, OR

CRAFTS research update. Weyerhaeuser Vegetation Management Effectiveness Meeting, North Bend, WA

The influence of woody and herbaceous vegetation on conifer survival and growth: what have we learned from research? Oregon Department of Forestry Annual Reforestation Conference, Coos Bay, OR

The influence of woody and herbaceous vegetation on conifer survival and growth: what have we learned from research? Cavenham Forest Industries, Seaside, OR

Vegetation management problems and research in the Pacific Northwest. University of Minnesota, College of Forestry, Cloquet Forestry Center, Cloquet, MN

Thresholds of interspecific competition on young conifers and modeling the effects of vegetation management. Pesticide Recertification Course, Washington Department of Natural Resources, Fife, WA

Meeting the biological requirements of conifer seedlings during site preparation. Reforestation Planning and Cost Control Shortcourse, College of Forestry, Oregon State University, Corvallis, OR

Plant competition and young stand growth models, Fernhopper Day presentation, College of Forestry,

Oregon State University, Corvallis, OR

Overview of CRAFTS vegetation management research. Third Annual British Columbia Vegetation Management Research Committee Workshop, Vancouver, British Columbia, Canada.

An introduction to forest vegetation management tools and techniques. Forest Vegetation Management Workshop, Forestry Extension, Oregon State University, Corvallis, OR

Triclopyr dose-response curves for bigleaf maple sprout clump control. Forest Vegetation Management Workshop, Forestry Extension, Oregon State University, Corvallis, OR

Interspecific competition indices for vegetation management decisions on the Siuslaw National Forest. USDA Forest Service Region-6 Silviculture Business Meeting. Portland, OR.

Interspecific competition indices for vegetation management decisions on the Siuslaw National Forest. Siuslaw National Forest and Bureau of Land Management Silviculture Workshop, Depoe Bay, OR

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*1987:*

The effects of woody and herbaceous vegetation on conifer survival and growth. Willamette Industries Vegetation Management Meeting, Albany, OR

Meeting the biological requirements of conifer seedlings during site preparation. Reforestation Planning and Cost Control Shortcourse, College of Forestry, Oregon State University, Corvallis, OR

Advances in forest vegetation management research from the CRAFTS Cooperative. Weyerhaeuser Company Spray Effectiveness Conference, Springfield, OR

Treatment prescriptions for controlling bigleaf maple sprout clumps, Oregon Department of Forestry, Western District Annual Reforestation Conference, Corvallis

Interspecific competition index development on the Siuslaw National Forest. Siuslaw National Forest Silviculture Workshop, Cottage Grove, OR

Meeting the biological requirements of conifer seedlings during site preparation. Reforestation Methods Workshop, Forestry Extension, Oregon State University, Bend, OR

Site-preparation cost control. Reforestation Methods Workshop, Forestry Extension, Oregon State University, Bend, OR

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*1986:*

Vegetation management options: when and where to use available tools. Vegetation Management Options in Southern Interior Forests Symposium, Southern Interior Silviculture Committee and Association of BC Professional Foresters, Nelson, British Columbia, Canada

Principles of forest vegetation management. Forestry for teachers class lecture. College of Forestry, Oregon State University, Corvallis, OR

Principles of sprayer calibration. Forest Vegetation Management Workshop, Forestry Extension, Oregon State University, Corvallis, OR

Tools and techniques in forest vegetation management. Forest Vegetation Management Workshop, Forestry Extension, Oregon State University, Corvallis, OR

Mechanical vs. chemical weed control in forestry, Weed Control Shortcourse, Jackson County Extension Service, Medford, OR

Herbicide application technology. Forest Vegetation Management Workshop, Forestry Extension, Oregon State University, Corvallis, OR

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*1985:*

Practical experience in the control of *Rubus* spp. in the Oregon and Washington Coast Range. Forest Vegetation Management Workshop, Forestry Extension, Oregon State University, Corvallis, OR

Vegetation management in forest plantations, Regeneration Planning Workshop, Forestry Extension, Oregon State University, Corvallis, OR

Vegetation management objectives and the implications for fire, chemical, mechanical, and manual tools, Forest Advisors Workshop, Washington State University Cooperative Extension, Olympia, WA

Mechanical and manual site preparation in reforestation, graduate reforestation class, College of Forestry, Oregon State University, Corvallis, OR

Maximizing the effectiveness of non-chemical vegetation management treatments. Forest Vegetation Management Workshop, Forestry Extension, Oregon State University, Corvallis, OR

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*1984:*

Vegetation management in forest plantations, Regeneration Planning Workshop, Forestry Extension, Oregon State University, Corvallis, OR

Forest vegetation management in the Pacific Northwest, School of Forestry, Auburn University, Auburn, AL

Principles of forest vegetation management, undergraduate reforestation, College of Forestry, Oregon University, Corvallis, OR

Assessing weed competition in forest plantations, Crown Zellerbach herbicide short course, Wilsonville, OR

Herbicide application technology, Forestry Herbicide Symposium, California Licensed Foresters Association, Eureka, CA

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*1983:*

Principles of forest vegetation management, undergraduate forest biology, College of Forestry, Oregon State University, Corvallis, OR