



Alberta Forestry Research Institute Annual Report 2004-05 A Year in Review

Overview

The Alberta Forestry Research Institute (AFRI) was formed in 2002 and is an unincorporated board comprised of representatives from industry, academia and government, established under the *Alberta Science and Research Authority Act*. AFRI's mission is to enhance the contribution of science and research to the economic, environmental and community sustainability of Alberta and to promote the global competitiveness of its forest sector.

As Canada's fourth largest manufacturer of forest products, Alberta's forest sector contributes over \$8 billion to the provincial economy, ranking it third after the energy and agricultural sectors. Forestry is the primary industry in over 45 Alberta communities. To maintain its status as an integral contributor to Alberta's prosperity, the forest sector must innovate to remain globally competitive while ensuring the sustainability of our resources and communities. Investments in research and development are prerequisites of this innovation. Prioritizing, coordinating and promoting research and development and encouraging their application in our forest sector are the key responsibilities of AFRI.



Message from the AFRI Board

This year, AFRI presented its business plan for 2004-07 entitled *Sustainable Growth in Alberta's Forest Sector: A Life Sciences Approach* to the Standing Policy Committee on Education and Employment. This three-year plan recommends the long-term research and innovation direction required to achieve sustainability and growth in Alberta's forest sector. Three strategic directions for research investment are identified in the plan: sustainable forest management, enhancing and diversifying the value-chain, and new products and processes. We are gratified by the committee's response and look forward to implementing the plan.

Investing in AFRI's plan will contribute to three key strategies of the Alberta government:

- *Securing Tomorrow's Prosperity*, the value-added strategy
- *Growing Our Future*, the life sciences strategy
- *Water for Life*, Alberta's water strategy

Each strategy is an essential component of the province's 20-year strategic plan, *Today's Advantage, Tomorrow's Promise*. Without such investment, Alberta's forest resources – our principal renewable natural resources and the infrastructure that adds value to them – are at risk of stagnating or even declining. AFRI is working hard to avert this possibility by promoting a coordinated innovation agenda to all elements of the forest sector.

AFRI's board members are encouraged by the spring 2005 Throne Speech that stated:

1. Wise land management is crucial to ensure the sustainability of these (Agriculture, Energy, Forestry and Tourism) sectors, and continued prosperity for Albertans,
2. This government will develop a land-use management framework, supported by effective resource and environmental policies and shared, integrated information systems, and
3. The government will explore ways for the economy to be more knowledge-based by adding value to primary resource industries and expanding manufacturing and business services,

These statements validate AFRI's plan as a relevant and timely contribution to the Alberta government's long-term strategic plan.

AFRI looks forward to implementing its innovative bio-products and sustainable production strategies to expand Albertans' interest in the forest sector, and to working with the new Life Sciences and ICT Institutes as they become operational.

Original signed by:

Original signed by:

Frank Oberle, MLA.
Co-Chair
June 2005

William (Bill) Hunter
Co-Chair

Key Activities

AFRI's activities over the 2004-05 fiscal year support directions established by the Alberta Science and Research Authority, as well as the Alberta Innovation and Science business plan for 2004-07, specifically Goal 4: *Build the capacity and capability needed to support an innovative and globally competitive life sciences sector.*

- AFRI continued its detailed planning process to develop its strategic business plan for 2005/09 involving consultations with industry and the Alberta Forest Products Association; Alberta government departments such as Agriculture, Food and Rural Development, Energy, Environment and Sustainable Resource Development; and other stakeholders. As part of this process, AFRI conducted literature and market reviews, as well as research workshops in biodiversity management, bioproducts development, reforestation of disturbed lands, and advanced silviculture.
- In 2004-05, AFRI continued to manage the Alberta government's investment in the Sustainable Forest Management Network (SFMN). Established in 1995, the SFMN is hosted at the University of Alberta as an incorporated, non-profit Canadian Network of Centres of Excellence. Its mission is to:
 - Deliver an internationally-recognized, interdisciplinary program that undertakes relevant university-based research into sustainable forest management.
 - Develop networks of researchers and industry, government, Aboriginal, and non-governmental organization partners.
 - Offer innovative approaches to knowledge transfer.
 - Provide educational opportunities in an interdisciplinary, partner-oriented framework, with the goal of training scientists and advanced practitioners to meet the challenges of modern natural resource management.

Funding for this initiative is provided by the Government of Canada, the Government of Alberta (through AFRI), along with other provincial and territorial governments, forestry companies; Aboriginal groups; non-governmental organizations; the University of Alberta and BIOCAP Canada Foundation (BIOCAP is a not for profit research foundation exploring how the Canadian biosphere can address the challenges of climate change and greenhouse gas management.) AFRI has consulted with seven government departments on their strategic research priorities for the SFMN to ensure the network responds to Alberta's needs.

- AFRI continues two research program investments in composite fibre products and designs and processes for solid wood utilization; it also initiated a new program of research in forest productivity, focusing on advanced silvicultural practices and tree improvement.
- AFRI collaborated with its sister ASRA institutes, the Alberta Agricultural Research Institute and the Alberta Energy Research Institute, and others on a research proposal entitled *A demonstration project on the use of biomass for regional combined heat and power generation.*

- AFRI continues to provide technical advice to the Manning Forestry Research Fund. This unique fund provides an on-going program of research aligned to AFRI's strategic priorities and funded entirely through industry contributions based on the volume of trees harvested.
- AFRI participated on three national forestry organization committees dealing with: forest products, forest utilization, and pulp and paper. This participation provides Alberta input to national initiatives and develops approaches to support economic growth in the forestry sector.

Program Expenditures

In 2004-05, actual expenditures for AFRI's programs were \$1.6 million.

Concluding Statement

As part of its commitments to building life sciences research capacity and to Alberta's water strategy, AFRI has recommended two long-term research investments:

- A research chair in hardwood genetics at the University of Alberta's Enhanced Forest Management Centre: This new capability will focus on applying recent advances in genetics and genomics to improving trees' growth and yield, and their robustness to the challenges of insects, diseases and climate change.
- Funding support for the Forest Watershed and Riparian Disturbance Project (FORWARD) as it enters its second five-year phase: This award-winning project will develop ways to ensure that water and associated nutrient movement within watersheds are integral parts of the forest industry's forecasting and planning. This research is critical to ensure current scientific understanding is applied to management practices to safeguard water quality and supply in the boreal forest.

AFRI has completed its initial planning and implementation phase and is well positioned to aggressively pursue new research and development investment opportunities that will deliver "tomorrow's promise" for Alberta's forest sector.