

Annual Report

July 1, 2007 — June 30, 2008



Institute of
Forest Biotechnology

The Institute of Forest Biotechnology

“Stewardship based on Science and driven by Dialogue”

The Institute supports the responsible use of biotechnology in trees. We advance the societal, environmental, and economic benefits biotechnology can bring to forests around the world. The Institute of Forest Biotechnology (IFB) is the only non-profit organization to address the sustainability of forest biotechnology on a global scale.

Our forests are under pressure from global trade, population growth, invasive threats, and increased demands on natural resources. When used responsibly, biotechnology can be a powerful tool to combat the damaging effects invasive pests and a changing climate have on our forests. The technology can also be used to balance the demands people place on forests. The IFB is focused on accelerating the benefits to society and the environment, while addressing the risks in this burgeoning field.

The Institute is a unique organization that brings together diverse sectors and stakeholders to address the opportunities for native forest protection, restoration of threatened tree species, scientific advancement, stakeholder engagement, and responsible use of the products of forest biotechnology.

The unifying principles that encompass all of IFB's work are science, dialogue, and stewardship. These principles permeate all of the Institute's initiatives, are reflected in its board membership, and the foundation of its work with stakeholders.

From the Chairman of the Board and the President

The driving forces of forest biotechnology are changing rapidly. Practical near-term applications are coming into focus at a time of intense interest in forest conservation and renewable resource use. Remarkable achievements in research and development are raising expectations for benefits and concerns about unintended consequences.

The Institute of Forest Biotechnology is addressing critical opportunities and challenges that will shape the future of forests and forestry. For example, the IFB is working with other organizations to increase funding support for essential research in tree genomics, forest restoration, and ecological effects of forest biotechnologies that include genetic engineering. The Institute is undertaking a Responsible Use initiative to produce stewardship principles for applications of genetically engineered trees. These principles will be developed through a transparent process involving diverse stakeholders.

The IFB made several changes during 2007 to increase its capacity to encourage research, develop Responsible Use Principles, and address other issues important to the future of our forests.

- Programs have been restructured as a set of initiatives built on the unifying principles of science, dialogue, and stewardship. Current initiatives are Responsible Use, Pine Genome, Heritage Trees, Forest Fuels, and Addressing Forest Biotechnology Concerns. These initiatives are designed to facilitate stakeholder engagement and are described in the Program Activities section of this report.
- Communications have been improved by redesigning the IFB website and expanding the reach of our newsletter. All new material will be available online. Website content includes slide presentations and video from meetings as well as reports, newsletters, and other documents created by the IFB and its partners. We invite you to visit www.forestbiotech.org and sign up for our BioSylvan Newsletter.
- The Forest Biotechnology Partnership has been expanded to include 18 Universities, companies, foundations and government agencies. The Partnership provides a networking and coordination mechanism to strengthen research and communications in all areas of forest biotechnology. More information about the Forest Biotechnology Partnership is available online at: www.partners.forestbiotech.org

During its first seven years of existence, the Institute has enabled important aspects of science, dialogue, and stewardship that are essential to realizing the potential value that forest biotechnology can bring to society and the environment, while mitigating potential risks. We offer sincere thanks to past and current members of Institute's Board of Directors and staff for their efforts and are very pleased that Mr. George Weyerhaeuser, Jr. will be the next Board Chairman. The Institute is well-positioned to help shape a sustainable future for forest biotechnology. We invite your participation.

Sincerely,

Adam Costanza, *President*

Alan A. Lucier, *Chairman*



LUCIER



COSTANZA

Program Activities

July 2006 – June 2007

Responsible Use

The IFB has launched an initiative to develop principles for the Responsible Use of genetically engineered trees. Biotechnology, including genetic engineering, is a powerful tool being used to grow trees with special characteristics. When used responsibly, society and the environment can benefit from advanced tree breeding technologies to protect threatened species, remove contaminants from soil, and grow more wood fiber on less land.

Genetically engineered papaya and plum trees are being grown today, as are poplar trees in China. Within the next five years genetically engineered trees will be grown for fiber production, but there are no long-term guidelines for the stewardship of these trees. There needs to be a mechanism to determine which uses of this technology will bring benefit, and which might cause harm. Without Responsible Use Principles, long-term management of these trees may never be addressed. Through science, dialogue, and stewardship, we can enhance the benefits of these trees while minimizing any risks.

The Institute of Forest Biotechnology will manage the development of Responsible Use Principles for genetically engineered trees in a highly transparent, multi-stakeholder driven process.

The Responsible Use initiative is a culmination of much of the Institute's work over the last seven years. This initiative will provide users of genetically engineered trees with effective principles that delineate with certainty what are responsible uses, and what are not. Users of the principles may include, but are not explicitly limited to: forest product companies, forest owners, purpose grown cellulosic forest fuel companies, government agencies, research and development organizations, nurseries, orchard owners, users of genetically engineered tree products, and private individuals. In addition, anyone interested in the long-term stewardship of genetically engineered trees will find the creation of these principles important.

A web page for the initiative has been created, www.responsibleuse.org, to help disseminate material associated with this initiative, and provide a portal for open stakeholder participation.

Pine Genome

The Pine Genome Initiative (PGI) is a scientific plan, supported by a broad coalition of scientists, universities, foresters, land owners, and industry, to use the revolutionary tools of genomics to increase our knowledge of the molecular processes that control economic and ecological traits in pine and other coniferous trees.

The PGI will be implemented through a competitive grants program administered by federal agencies with responsibilities and expertise in tree genomics research.

The PGI Implementation Committee co-chaired by Adam Costanza, IFB and Randy Johnson, US Forest Service has had several successes this year. Meetings with members of the U.S. Congress raised awareness of the PGI and resulted in language to the House Farm Bill Report specific to the PGI. Work on mirroring report language in the Senate Farm Bill is ongoing and a letter supporting PGI has been submitted to the Chairs of the Senate Agriculture Committee from Senator Gordon Smith of Oregon. Thank you to Dr. Hal Salwasser, PGI Implementation Committee member from Oregon State University, for spearheading the request for the letter.

The Forest Landowners Association has been very supportive of the PGI and has been an integral part of most visits to Congressional staffers along with other Implementation Committee members. This year the PGI had five organized visits to many of the Congressional offices to share information and answer questions about PGI.

Heritage Trees™

The IFB is working with Partners and Sponsors to incorporate climate change and forest health into the Heritage Trees initiative. Forest biotechnology has the potential to play a vital role in ensuring the health of the world's forests. To that end, this project will establish a pathway that seeks to responsibly develop forest biotechnology to counteract invasive threats. Genetically modified American chestnut will be used as the prototype to test and understand the scientific, societal, and regulatory issues implicit in using forest biotechnology to protect forests.

Forest Fuels™

The IFB has launched the Forest Fuels initiative to accelerate the responsible use of biotechnologies to increase the yield and sustainability of forest derived fuel sources. Sustainably grown domestic fuel provides a higher degree of energy security for any nation. Fuels derived from cellulose, trees in particular, will be strategically important to the United States' energy policy in the near term. The Forest Fuels initiative aims to provide decision makers with information about the maximum sustainable potential of forest fuels.

Addressing Forest Biotechnology Concerns

All of the IFB's initiatives are founded on the platforms of science, dialogue, and stewardship. Addressing ecological and societal concerns associated with use of forest biotechnologies that include asexual propagation, genetic marker aided breeding, and genetically modified organisms, is a critical aspect of everything that the IFB works for. Addressing forest biotechnology concerns is accomplished through symposia and projects, and partnering with stakeholders to fill knowledge gaps.

Forest Biotechnology Partnership

The Forest Biotechnology Partnership is a mechanism to accelerate the responsible use of forest biotechnology. The Partnership is international in scope and includes academic, government, non-profit, and industrial organizations. The Partnership works closely with the IFB to manage initiatives and direct the organization.

Partnership Benefits

- **Invitation to Can't Miss Events:** A number of IFB's meetings have resulted in high-dollar research grants and new initiatives. Partners will always be invited to attend these meetings at no cost, or below-margin cost.
- **Focus IFB's Initiatives:** Partners have significant influence in IFB's initiatives. Responsible Use®, Forest Fuels®, Pine Genome®, and Heritage Trees® initiatives include Partners to directly affect strategic direction and work progress.
- **Critical Research \$:** The IFB helps to increase the pool of grant money available from other organizations to forest biotechnology researchers. To date, over 3.8 million dollars have been leveraged thanks to the IFB's Partners and Initiative Sponsors.
- **Access Influential People:** The IFB has access to the most influential people in the field of forest biotechnology. Partners are part of this network and they benefit from being able to interact with key individuals directly, or via the IFB.
- **Help Manage the IFB:** This Partnership provides a direct mechanism to manage strategic aspects of the Institute. IFB's staff address ideas from Partners immediately, or elevates them to the Board of Directors when warranted. Nearly half of the IFB's Board members are from Partner organizations.

Partner organizations provide an annual contribution to the IFB as general support. Several have provided sustaining contributions in excess of the nominal fees. Other organizations choose to be Initiative Sponsors to focus intensely on specific work. Partners receive update letters every two to three months that summarize pertinent information from the Partnership and work being done in biotechnology around the world. Partner meetings are held annually to highlight initiatives and get strategic management input.

For additional information about becoming a Partner or Initiative Sponsor please contact Adam Costanza or Susan McCord. Additional information about the Forest Biotechnology Partnership, and profiles from current partners is available online at: www.partners.forestbiotech.org.

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Administration

July 2006 – June 2007

Additions to the Staff

IFB welcomed a new President, Adam Costanza, to the organization in January 2007. Adam has a degree in Energy and the Environment through Chemical Engineering from the University of Rochester, and a Masters in Environmental Management from Duke. He was previously at International Paper for five years and worked as a manager of sustainability initiatives for its environmental business services.

The Board of Directors

As its Bylaws and philosophy convey, the IFB Board of Directors consists of representatives from three main sectors: academia/governmental organizations, non-governmental/public interest organizations and industry.

Dr. Alan Lucier, Senior Vice President of the National Council for Air and Stream Improvement, will be stepping down as Chair of the Board of Directors of IFB in April 2008. Mr. George Weyerhaeuser, Jr. has been elected as new Chair and will be starting his duties at the April 2008 meeting of the board. Mr. Weyerhaeuser is Senior Fellow at the World Business Council for Sustainable Development.

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Sara Boettiger
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Ron Sederoff
Kim Steiner

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Susan McCord, Secretary/Treasurer

Forest Service Liason

Randy Johnson

Partners And Sponsors

The Institute would like to extend a special thanks to those individuals and organizations with the foresight and generosity to support the IFB in its programs, enabling growth, establishing credibility, and to move its mission forward.

Arauco	National Institute for Environmental Health Sciences	UNC Office of the President
ArborGen, LLC*	North Carolina Biotechnology Center*	Universidade Federal de Viçosa*
bio-era	North Carolina State University*	University of Abertay Dundee
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