Guest Editorial

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Developing a viable forest biorefinery strategy

Biorefinery processes are emerging and bioproduct markets are volatile, so it is important that technology and business risks are identified and systematically mitigated in establishing biorefinery strategies. Companies must constantly re-evaluate their strategies as they are implemented in a phased manner. Over the short term, a competitive advantage will be created by the technology strategy, which should ultimately serve the business strategy over the long term.

To help companies develop a viable biorefinery strategy, the TAPPI "Designing the Forest Biorefinery" professional development course was created. It has tracked advances in industry transformation in recent years, and is being attended by an increasing number of forest products company decision-makers. The three-day course addresses a wide range of issues in three subject areas: (1) Biorefinery Fundamentals: Science and Innovation (Day 1), (2) Setting Biorefinery Strategy (Day 2), and (3) Biorefinery Techno-Economics and Case Studies (Day 3).

The biorefinery course has previously been given on three occasions: (1) the PAPTAC Biorefinery Design Course in June 2013 held in Vancouver, BC, Canada, (2) the TAPPI Biorefinery Design Course in September 2013 held in Green Bay, WI, USA, following the International Bioenergy and Bioproducts Conference (IBBC), and (3) the Biorefinery Design Course hosted by Innventia in March 2014 in Stockholm, Sweden, alongside the Nordic Wood Biorefinery Conference (NWBC).

The next Biorefinery Design Course will be held October 30-November 1, 2015, in Atlanta, following TAPPI's PEERS and IBBC Conferences.

Each time the Biorefinery Design Course has been offered, it has been led by Paul Stuart of École Polytechnique in Montréal and co-sponsored by EnVertis Consulting. The course has attracted a wide variety of participants, including suppliers, research institutes, and consultants. However, attendees have predominantly been from forest products companies in North and South America, Europe, and Scandinavia.

2015 Biorefinery Design Course

The next TAPPI Biorefinery Design Course will be offered immediately following the TAPPI 2015 IBBC at the Hyatt Regency Atlanta, GA, USA, from October 30 to November 1.

Hosted by TAPPI and co-sponsored by PAPTAC and EnVertis Consulting, the upcoming course in Atlanta aims to provide current knowledge and tools for forest products industry leaders, technology providers, and consultants so they can better develop biorefinery strategies and stay aware of emerging biorefinery technologies and their design/implementation in a transformative business strategy. In contrast with conference presentations, the course offers a structured sequence of "how to" lectures for setting biorefinery

strategy, and emphasizes exchange between participants and 16 instructors from across North America and around the world.

The curriculum of the three-day course gives a unique forest products industry perspective and addresses critical questions for those companies considering biorefinery implementation, such as:

- Which biorefinery products will provide sustainably good margins over the long term?
- Which emerging biorefinery processes are the most promising for making these products?
- What are process efficiencies and operating costs today, and what might they be five years from now after the process technologies have matured?
- How do we best use existing mill infrastructure when implementing the biorefinery?
- Can we implement the biorefinery and at the same time lower the unit costs of our wood, pulp, and paper products?
- What is the profitability of a pulp mill integrated with a biorefinery process compared to one that is not integrated?

In-depth look at the 2013 course

In anticipation of the October-November 2015 course, the *TAPPI JOURNAL* special feature on p. 609 synthesizes messages and results from the 20 presentations given at the last TAPPI Biorefinery Design Course in Green Bay.

This special feature offers information related to biochemical and thermochemical process routes for the production of bioproducts, including case studies. It also provides a closer look at the status of the lignin precipitation biorefinery strategy, which had recently started up at the time of the 2013 course. **TJ**

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