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## JOINT MEETING

DECEMBER 14<sup>TH</sup> & 15<sup>TH</sup>, 2023

GREAT WOLF LODGE – WILLIAMSBURG, VA

549 E Rochambeau Drive, Williamsburg, VA 23188

1-800-551-9653

## “KILNCON 2023”

*The preeminent event: Gathering experience and skill combined into workshops, technical sessions and social opportunities for anyone & everyone involved with Lime Kilns & Recaust*

Here is the [registration link](#) for KilnCon 2023

THURSDAY, DECEMBER 14, 2023

Grand Oak Ballroom – Great Wolf Lodge

8:00 AM – 1:30 PM Check-in and Registration

8:00 AM – 5:00 PM Technical Program

### WORKSHOP SESSIONS

THURSDAY, DECEMBER 14, 2023

8:00 AM – 5:00 PM (EST)

#### **WORKSHOP #1 - 9:00AM -12:00PM**

#### **LIME KILN & RECAUST – PROCESS & OPERATIONS**

**“Turnin’, Burnin’ & Churnin’ - from Mud to Reburn & Green to White”**

8:00 – 10:00 AM - LIME KILN PROCESS/OPERATIONS WORKSHOP

WORKSHOP FACILITATOR:

- *GLENN HANSON - USA Pyro Technical Sales Support, Metso*  
*Present and facilitate discussions on lime kiln process & operations*

Preliminary Agenda

- *The Lime Kiln Process*
- *Types of Kilns*
- *Combustion & Heat Transfer in the Lime Kiln*
- *Improving Lime Kiln Efficiency; basic optimization & major projects*
- *Lime Kiln Quality Considerations & Related Process Concerns*
- *General Guidelines for Lime Kiln Operation*

**10:00 AM – 10:15 AM – Break**

**10:15 AM– 12:00 PM - RECAUST PROCESS/OPERATIONS WORKSHOP**

**WORKSHOP FACILITATOR:**

- **JEFF BUTLER** - *Mills Division-Center of Excellence, Manager Engineering Services, Graphic Packaging International, Atlanta, GA*

*Any experienced chef will tell you; the best quality ingredients and tools are necessary to make the recipe work. To make good white liquor & have the least problems in recausticizing, it is essential to have clean green liquor, high quality reburned lime & good causticizing control. This presentation will cover these topics and relate the importance of each step & the equipment involved in the recausticizing process. Jeff Butler with +20 years in this process area in mills, as a supplier & now at the corporate level, will discuss green & white liquor handling in both sedimentation & filtration based systems, lime mud & dregs filtration. Included will be functional descriptions, current sizing standards and troubleshooting problems in recausticizing operations.*

**12:00 PM – 1:00 PM LUNCH (Provided by TAPPI Local Sections)**

**WORKSHOP #2 – 1:00PM – 5:00PM**

**LIME KILN MAINTENANCE “As the kiln turns & keeps turning”**

**1:00 PM – 2:15 PM KILN MAINTENANCE WORKSHOP**

- **GLEN CAHALA** - *Sales Engineer, A-C Equipment Services, Milwaukee, WI*

*An experienced kiln design, manufacture & service company gentleman will share knowledge & discuss key maintenance concepts for the lime kiln.*

**Preliminary Agenda**

- *Basic Lime Kiln Mechanical Design*
- *Kiln Shell, Tires/Riding Rings, Carrying/Support/Trunnion Rollers, Bearings, Thrust Mechanisms*
- *General Lime Kiln Inspections; Daily, Monthly, Annually*
- *Ovality; what is it & why is it critical to monitor*
- *Lime Kiln Drive Systems*
- *Open discussion, Q&A on Lime Kiln Maintenance*

**2:15 PM – 2:30 PM – Break**

**2:30 PM – 3:00 PM KILN ALIGNMENT WORKSHOP**

- **TOM ZHANG, PhD, PE, Principal Engineer, Optimus Solutions, Louisville, KY**

*Hot Kiln Alignments are a vital & critical set of services designed to analyze current kiln axis arrangement as well as other measurements that can offer insight into needed adjustments, repairs &/or parts replacement on rotary kilns. This presentation will cover the basics of hot kiln alignment surveys, different ways they are performed & the additional measurements that can be taken to provide a guide to getting a kiln into optimum mechanical operating condition*

**3:00 PM – 3:15 PM – Break**

**3:15 PM – 3:45 PM KILN ALIGNMENT WORKSHOP (continued)**

*Continuing the presentations & discussion on Kiln Alignments, 2 experienced personnel will cover shorter sub-topics directly related to kiln alignment*

- *(Tentative) JUSTIN BREADY, Project Manager, Kiln Technology Inc., Milwaukee, WI*  
*“What should be expected in a Hot Kiln Alignment & what should you do with the information that you receive”*
- *ANDY KNOUSE - Field Service Alignment Specialist, Metso, York, PA*  
*“How process & mechanical conditions affect lime recovery kiln thrust positions - a review of operations and mechanics for this phenomenon”*

**3:45 PM – 4:00 PM – Break**

**4:00 PM – 4:45 PM KILN ALIGNMENT WORKSHOP (continued)**

**PANEL DISCUSSION – OPEN Q&A**

**ALL 4 of the afternoon presenters will be available for an open Q&A session**

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## **LOCAL SECTION PLANNING MEETING**

**This is an open meeting; everyone is welcome to attend. WE NEED VOLUNTEERS! Come help RESTART & ENERGIZE the Virginia-Carolina Local Section.**

**Find out how this section operates, help plan the future and where you might plug in!**

**Thursday, December 14<sup>th</sup>, 2023**

**5:00 PM – 5:30 PM (EST)**

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## **SOCIAL RECEPTION**

**Oak Pre-Function Area – Great Wolf Lodge**

**ALL registered attendees are welcome, enjoy snacks & refreshments, unwind with fellow KilnConics**

**Thursday, December 14<sup>th</sup>, 2023**

**6:00 PM – 8:00 PM (EST)**

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# **“KILNCON 2023”**

**The preeminent event: Gathering experience and skill combined into workshops, technical sessions and social opportunities for anyone & everyone involved with  
Lime Kilns & Reconstituting**

## **TECHNICAL SESSIONS**

**FRIDAY, DECEMBER 15, 2023**

**Grand Oak Ballroom – Great Wolf Lodge**

**8:00 AM – 1:30 PM Check-in and Registration**

**8:00 AM – 5:00 PM Technical Program**

**8:00 AM – 9:30 AM TECHNICAL SESSION 1**

**“Rotary Kiln Support Systems: A Comprehensive examination of the rotational support system for rotary kilns”**

*Andrew Wisner, Director of Operations, NAK Kiln Services, Pendergrass, GA*

**“High Efficiency Cyclone System – A Mill Case Study”**

*TODD LEWICK – Project Manager, Andritz, Roswell, GA*

*This presentation will present a mill case study describing a project where a high efficiency cyclone system was installed on a kiln. This case study is a follow up to a paper presented at the 2016 TAPPI Peers meeting where the theoretical basis was presented for increasing kiln efficiency and capacity by installation of a properly designed high efficiency cyclone system to encourage kiln internal dust recycle. Mill operating data and operational experience is presented showing the “real world” benefits that can be obtained when a properly designed cyclone system is installed.*

**“Lime Kiln Dynamics; How to Increase Capacity &/or Efficiency”**

*TOBIN ALT – Vice President, Chemical Pulping Group, Kadant Black Clawson, Lebanon, OH*

**9:30 AM – 9:45 AM – Break**

**9:45 AM – 12:00 PM TECHNICAL SESSION 2**

**“Pokin’, Chokin’, Shootin’ & Shutdowns – A working mill solution”**

***BROOKS EPTING - Assistant Recovery Superintendent, WestRock, Demopolis, AL***

*Presented by: GLENN HANSON – Pyro Technical Sales Support, Metso*

*This presentation will review common causes, contributing factors and resolutions to kiln build-up. Often kiln internal buildup must be removed as it limits production &/or the excessive loading effects the kiln mechanical operation. A mill with chronic issues looked at more associated areas &/or deeper into overall area processes to find root contributors and develop solutions. Presentation will include updates on their work which has continued to the point of near total elimination of kiln build-up issues and the associated operational problems & costs. Additional current issues facing the lime kiln/reconstituting area of the mill will also be presented & discussed.*

**“Proactive Ring Removal at Resolute Forest Products (now New Indy Containerboard)  
Catawba, South Carolina Mill, a Case Study”**

*(Tentative) JIM CONOVER – Director of Business Development, IA Bulk Materials, Cumming, GA*

*Ring formation occurs in the rotary kilns used by the pulp and paper industry to regenerate the lime. The presence of rings can restrict the movement of material through the kiln. Even if the root cause of ring formation is known,*

*from a practical standpoint, it can be difficult to eliminate rings. In mills where ring formation is a recurring problem, mechanical ring removal systems should be considered. This presentation will present a current successful case study on the use of a CO<sub>2</sub> system for ring mitigation.*

**“Reducing Downtime and Event Frequency of Lime Kiln I.D. Fan Scaling & Cleaning Through Fan Operation Evaluation & Upgrade with Increased Efficiency I.D. Fan Rotor Design”**

*ANDREW WEBSTER - Technical Sales, AirStream Systems Inc., Waterloo, ON, Canada*

*The heavy dust load passing through the ID fan represents a major problem for mills, as the dust sticks to the fan blades. Over time this build-up accumulates and eventually a piece breaks off putting the rotor out of balance. Operators are forced to shut down the lime kiln to clean the fan. We’ve successfully solved severe build-up problems in many lime kiln applications with our high-efficiency rotor upgrade approach. In addition to solving build-up, these projects have been able to provide significant power savings. This presentation will review several actual case studies on lime kilns demonstrating the problems solved & benefits seen from I.D. fan retrofits.*

**“Mill Study on Increasing Lime Kiln Efficiency”**

*JOHN DEJARNETTE – Senior R&D Researcher, WestRock Corporation, Richmond, VA*

*Optimization of the lime kiln requires a review of the entire lime cycle. To increase the energy efficiency of the kiln, all auxiliary unit operations must function properly. It is also imperative that the lime & liquor in the system is of acceptable quality. We detail a kiln energy efficiency study performed at the WestRock Covington, VA mill. From a recausticizing standpoint, lime quality is much easier to control than liquor quality because liquor passes through many operations that are not under the lime kiln operator’s control. Recausticizing is a fairly closed cyclical process where lime is concerned, so saturation of impurities to the point of operational issues must be considered. To get a true picture of the cost of operating the lime cycle, all inputs must be considered. The four main inputs are power, (electrical & fuel), fresh lime, caustic & water. Process engineers can use this detailed troubleshooting approach to help optimize various parts of a mill.*

**12:00 PM – 1:00 PM – Lunch – Provided for attendees by the local sections**

**1:00 PM – 2:30 PM TECHNICAL SESSION 3**

**“Modern Lime Kiln Burner Designs to Better Control Thermal Profile When Firing Natural Gas”**

*MARTIN BEDDOWS, Product Manager – Burners Metso KFS Product Line, High Wycombe, U.K.*

*Many mills have switched from fuel oils &/or solid fuels to natural gas due to the dramatic decrease in pricing in recent years. Unfortunately, natural gas burns differently and with not as much radiant intensity resulting in reduced product quality control, decreased kiln production and exit gas volume & temperature constraints. Several burner companies have developed design modifications and changes to allow thermal profiles more similar to liquid fuels when firing natural gas. Additional benefits of these designs include NO<sub>x</sub> control & in a mill case, reduced cooler plugging. This presentation will offer before & after mill lime kiln operational data showing the benefits & value of these new designs.*

**“Alternative Fuel Firing to Reduce Carbon Emissions in Lime Kilns”**

*(Tentative) TBD – Pressure in on across all industries around the world to reduce their carbon footprint through the use of alternative fuels. This presentation will review the various fuels in use and with potential to be used in the future to reduce carbon emissions from often the largest fossil fuel consumer in a kraft pulp mill.*

**“Issues, Experience and Hope for the Future; Lime Kiln Operating Experiences with NCG Firing”**

*JEFF BUTLER - Mills Division-Center of Excellence, Manager Engineering Services, Graphic Packaging International, Atlanta, GA*

*The Graphic Packaging Mill at West Monroe, Louisiana has had some negative issues occurring when firing NCG’s. Some of these have been addressed including burner adjustments and initial trials on operational changes such as operating with firing hood doors closed that show positive promise. Following the initial presentation, we would look to facilitate a discussion on overall mill experiences to help us all find ways to improve operations and avoid costly production impairment &/or downtime.*

**2:30 PM – 2:45 PM – Break**

**2:45 PM – 3:30 PM TECHNICAL SESSION 4**

**“Design and Performance of Chain Systems in Rotary Kilns Used to Regenerate Lime in the Pulp and Paper Industry”**

*PETER GORAG – Principle, Houghton Cascade Holdings, LLC., Auburn, WA*

*As with any heat exchanger, it is the heat transfer surface area that is the most important aspect of chain system design. Increasing the chain surface area always lowers the heat rate while at the same time increasing the gas temperature at the hot end of the chain section. In the end, it is a combination of the area, chain density and economics that determine the amount of chain that can be effectively hung in the kiln. This presentation will discuss how the fuel type, mud moisture, excess air, shell heat losses, and other operating parameters impact the optimum design of the chain system for a given kiln.*

**“Optimizing the Water Balance – Reausticizing Area”**

*TOBIN ALT – Vice President, Chemical Pulping Group, Kadant Black Clawson, Lebanon, OH*

*Optimizing the water balance throughout the kraft process is critical to avoid chemical losses and maximize washing. This presentation will cover common issues and concepts to optimize water usage to produce Lime Mud with the least chemical content.*

**3:30 PM – 3:45 PM – Break**

**3:45 – 5:00 PM TECHNICAL SESSION 4**

**“Selection of Lime Kiln Refractories to Balance Cost and Efficiency”**

*CHRIS MACEY - Market Manager, Resco Products, Pittsburgh, PA*

*Kilns used to regenerate lime in the Kraft process are highly energy intensive. Due to the dramatic decline in the price of natural gas over the last decade, in combination with mounting pressures to increase production of existing assets, many mills are currently focusing more on increasing uptime and capacity as opposed to energy savings. This presentation provides recommendations to aid mill personnel in the design of optimized refractory linings for specific situations.*

**“Refractory Brick Installation Guidelines for Increased Kiln Reliability”**

*RYAN MCDONALD - Application Specialist, Harbison-Walker International, Pittsburgh, PA*

*The refractory brick lining in a lime recovery kiln is a critical element to overall kiln reliability and uptime. Refractory life is influenced by installation practices, kiln design and condition, refractory technology, and other operational factors. This presentation provides kiln owners and operators installation best practices to monitor installations, identify abnormal wear mechanisms, and troubleshoot potential refractory brick problems.*

**“New & Improved Lime Kiln Refractory for Energy & Emissions Savings”**

*KEVIN REGAN, Director – New Mkt Dvpt/Sr. Tech Sales Manager, Refratechnik, St. Louis, MO*

*Refractory manufacturers have developed new lines of reduced thermal conductivity “ES” rotary kiln brick – which have a dual meaning of Energy Savings (lower kiln shell temps) as well as potential Emissions Savings (via reduced fuel consumption). Typical products include 60% High Alumina (Andalusite) brick which is the primary refractory quality used in lime kilns.*

## **MEETING OFFICERS**

Meeting and Session Chairman: Glenn Hanson – Metso – 717/578-9610 / glenn.hanson@metso.com

Local Arrangements: John DeJarnette – WestRock – 540/717-6214 / john.dejarnette@westrock.com

## **HOST HOTEL LODGING INFORMATION:**

**GREAT WOLF LODGE – WILLIAMSBURG, VA**

**549 E Rochambeau Drive, Williamsburg, VA 23188**

**Call Great Wolf Customer Contact Center 1-800-551-9654**

**Hotel Direct at 757/229-9700**

**Website [www.greatwolf.com](http://www.greatwolf.com)**

**MUST REFERENCE BLOCK CODE 1223KILN (for discount room rates)**

**Room Block Cutoff Date is Wednesday, November 22, 2023**

Other Area Hotels:

- Holiday Inn Express: 1452 Richmond Rd. Williamsburg, VA 23185, 833/658-1361
- Hilton Garden Inn: 1624 Richmond Rd. Williamsburg, VA 23185, 757/253-9400
- Residence Inn: 1648 Richmond Rd. Williamsburg, VA 23185, 757/941-2000

## **MEETING PARTICIPATION FEES:**

Registration (TAPPI Member-mill)\*/\*\* \$200

Registration (Non-Member-mill)\*\* \$250

Registration (TAPPI Member-vendor)\* \$225

Registration (Non-Member - vendor) \$275

Guest (Dinner) \$50

Supplier Speaker \$100

Student \$25

Retired \$75

Mill Speaker \$25

\* rate applies to members of national TAPPI

\*\* three (3) or more attendees from the same plant site will receive a \$20 discount from the listed fee

**Here is the [registration link](#) for KilnCon 2023**

## Virginia-Carolina/Southeastern/Gulf Coast TAPPI Suppliers/Vendors Note:

Local Section meeting attendance has continued to grow over the past 30+ years with the financial support of the Local Section Suppliers Societies. With your generous support we can continue to offer social hours & family activities at annual meetings as well as general monetary support to the sections as needed.

The greatest advantage of a joint Hospitality Program is that it brings all of the attendees together. You, as the supplier, get maximum exposure & contact with all of the customer attendees. Customer attendees & their families, as well, are provided with better hospitality services because the participating suppliers pool finances and resources.

All contributing companies will be recognized at this meeting, as well as in a PowerPoint slide with your company's logo shown during breaks at this and succeeding meetings and in the GCT "Stock Exchange" & other Local Section newsletters during the coming year (see slide attached from 2023)

As in past years, affiliate companies and individuals are being asked to unite to sponsor this year's annual TAPPI Hospitality Program at various levels of your choice:

<b>GOLD</b> .....	<b>\$500.00</b>
<b>SILVER</b> .....	<b>\$350.00</b>
<b>BRONZE</b> .....	<b>\$150.00</b>
<b>INDIVIDUAL</b> .....	<b>\$75.00</b>

**Note: GOLD SPONSORSHIPS have the option to include a tabletop to display their products and services throughout the Workshops, Technical Meeting & Social Hour. Only a VERY limited number of tables (3x6) will be available and will be reserved first come, first paid, first served.**

**If your company is interested in being a Sponsor, at any level, please contact Hannah Peterson at TAPPI, [hpeterson@tappi.org](mailto:hpeterson@tappi.org), 770/862-3114 as well as including it when completing your meeting registration**

**Also, please send an electronic file of your company's logo to Hannah Peterson at TAPPI, [hpeterson@tappi.org](mailto:hpeterson@tappi.org)**

**Checks should be made payable to "Gulf Coast TAPPI", or you can pay by credit card at the meeting with your registration but we MUST have the complete sponsor information & commitment in advance.**

**TAPPI has asked me to remind our members that no outside activities such as golf, tennis or fishing should be conducted during the scheduled meeting times. Entertainment, to include hospitality suites, will not be scheduled during any TAPPI function.**

**Thank you for your continued support,**

**Here is the [registration link](#) for KilnCon 2023**



**LONG - RANGE PLANNING CALENDER**

The following table is the *proposed schedule* for meetings through the year 2023. Please contact the meeting chairman if you need any further information about the meeting and to confirm the meeting details.

<b>DATE</b>	<b>LOCATION</b>	<b>TOUR</b>	<b>TOPIC(S)</b>	<b>MEETING CHAIR(S)</b>
Sep 14-15, 2023	Auburn, AL		Work Life Balance	<b>Meeting and Technical Sessions: Chris Marchio/Ryan Causey</b> <b>Local Arrangements: Leigh Kinne/APPF</b>
Dec 14-15, 2023	Williamsburg, VA		KILNCON 2023	<b>Meeting and Technical Sessions: Glenn Hansen</b> <b>Local Arrangements: John DeJarnette</b>
February 2024 Tentative	Mobile, AL	TriNova	Process Control, Maintenance, En	<b>Meeting and Technical Sessions: Tim Watson</b> <b>Local Arrangements: Tim Watson</b>

**TAPPI'S ANTITRUST POLICY STATEMENT**

The Technical Association of the Pulp and Paper Industry, Inc. is a professional and scientific association organized to further the application of the sciences in the pulp and paper industry. Its aim is to promote research and education in the practice of pulp and paper manufacture. TAPPI is not intended to, and may not, play any role in the competitive decisions of its members or in any way restrict competition in the pulp and paper industry.

**Please note that TAPPI policy prevents the scheduling of business or social activities between and among participants during times of scheduled TAPPI functions.**

# GULF COAST TAPPI EXECUTIVE BOARD WORKING FOR YOU!

## GULF COAST TAPPI OFFICERS

Chairman	Ryan Causey	Schneider Electric	205-276-8220
Vice Chairman	Leigh Kinne	Trimble	772-209-0129
Treasurer	Harris Nelson	WestRock	334-341-9529
Secretary	Chris Edmonds	WestRock	804-510-4170
Past Chairman	John DeJarnette	WestRock	540-717-6214

## EXECUTIVE COMMITTEE 2023-2024

Tim Watson – Tri Nova	Kaitlin Britton – Proximus Eng.
Chris Bowden – Valmet	Ryan Causey – Schneider Electric
David Neal – Hoist & Crane	Mike Yee – RTC Consultants
Rinkey Stanley, Jr. – Valmet	Burak Aksoy – Auburn
Herb Betts – K-Patents	Jared Mowery – Georgia Pacific

## COMMITTEE CHAIRS

Corresponding Secretary	Chris Marchio	WestRock
Registration	Bill Josephson	Auburn University
Membership/Publicity	OPEN	
LSOC	Glenn Hanson	Metso KFS
Supplier Society Chairman	David Neal	Hoist & Crane
Student Chapter Advisors	Bill Josephson	Auburn University
	Mark Bricka	Mississippi State University

**YOUR PARTICIPATION IN THIS GROUP IS WELCOMED AND NEEDED! CONSIDER THE PROFESSIONAL DEVELOPMENT AND CAREER OPPORTUNITIES FROM NETWORKING AND LEADING THE GULF COAST ASSOCIATION.** Please contact Chris Marchio at 334-560-6158 or [chris.marchio@westrock.com](mailto:chris.marchio@westrock.com) for information on being a part of this leadership team.

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McFarlen Engineering Ltd.



## DECEMBER 2023 TECHNICAL PROGRAM

# “KILNCON 2023”

*The preeminent event: Gathering experience and skill combined into workshops, technical sessions and social opportunities for anyone & everyone involved with Lime Kilns*

### REGISTRATION/APPLICATION FORM

Or use this link to register: [registration link](#)

Please Print or Type

<b>Name:</b>		<b>Title:</b>	<b>Name for Badge:</b>
<b>Company:</b>			
<b>Address:</b>			
<b>City:</b>		<b>State:</b>	<b>Zip</b>
<b>Work Phone:</b>	<b>Cell:</b>	<b>Email:</b>	
<b>National TAPPI Member?</b> Yes / No		<b>Category:</b> Mill / Supplier / Consultant / Educator / Retired / Student	

**Payments for Thursday & Friday, December 14th & 15th Technical Sessions:**

<input type="checkbox"/> Technical Session, Mill & Educator */***	8:00 AM-5:00 PM	\$200***
<input type="checkbox"/> non-TAPPI Mill Person, Educator ***	8:00 AM-5:00 PM	\$250***
<input type="checkbox"/> Technical Session, Students	8:00 AM-5:00 PM	\$25
<input type="checkbox"/> Technical Session, Retired	8:00 AM-5:00 PM	\$75
<input type="checkbox"/> Technical Session, Supplier & Consultant *	8:00 AM-5:00 PM	\$225
<input type="checkbox"/> non-TAPPI Supplier, Consultant	8:00 AM-5:00 PM	\$275
<input type="checkbox"/> Speaker (mill representative)	8:00 AM-5:00 PM	\$25
<input type="checkbox"/> Speaker	8:00 AM-5:00 PM	\$100
<input type="checkbox"/> Gold Level Supplier Sponsorship**	Tabletop: yes      no      (circle)	\$500
<input type="checkbox"/> Silver Level Supplier Sponsorship		\$350
<input type="checkbox"/> Bronze Level Supplier Sponsorship		\$150
<input type="checkbox"/> Individual Level Supplier Sponsorship		\$75

\* rate applies to members of national TAPPI

\*\* tabletop requires one member from the Supplier to also register for technical program

\*\*\* three (3) or more attendees from the same plant site will receive a \$20 discount from the listed fee

**TOTAL FEES PAID**

\$

Will you attend the Thursday evening Social Hour?     No     Yes