

Annual Report



Center for Forest Products Business

Alfred P. Sloan Foundation Industry Studies Center

Department of



College of Natural Resources and Environment



Reporting Period July 1, 2019 - June 30, 2020



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October 2020

Letter from Director:

Hello from your Center,

I am not sure how to start this letter for 2020. These are unprecedented times and I know your organization has been greatly impacted by this pandemic, just as we have at Virginia Tech. From a marketing viewpoint, nothing really makes sense. Hardwood lumber production is down, housing is up, and softwood lumber prices hit record highs this year. Exports are down and imports are down. We all are getting fatigued of various lockdowns and the daily reminder of how many people are sick, or what small business in our neighborhood had to close its doors due to Covid-19. Yet, the economy keeps plugging away behind all the masks. The positive side of this is businesses are finding new ways to satisfy customer needs which will help them in the future and new businesses are being created that will serve us better after this pandemic has passed.

It is hard to believe that another year has passed and we welcomed 160+ students back in late August. Many of you have hired them for summer internships. When we visit with you during the student interviews, internships are one of the major factors' employers are looking for when they hire new permanent workers. There is no substitute for good experiences in your mills or offices. We again thank you for helping our students gather this valuable experience. We currently have one of the largest undergraduate enrollments in the department's 40+ year history. We virtually graduated over 50 students last May, with many of them finding employment within our industry.

As I mentioned last year, I have stepped down as Department Head the end of 2019 in preparation for my retirement. The Department hired Dr. Ching Huang from the Northern Arizona State University's Forestry College. She started in January and unfortunately was hit dealing with the pandemic as part of her first duties. She is a Forest Economist by training, so she has a business background.

I want to thank you for your continued support of our programs. I hope you will contact us with your needs for employees or summer interns. Many of our classes have projects and if you need a short specific project investigated, please contact me and I will see if we can work it into a class. Please feel free to contact me with any comments or suggestions to improve the program (rsmith4@vt.edu). Again, thanks for your support of our students and I wish you a successful year.

Sincerely,

Bob Smith

"A pessimist sees the difficulty in every opportunity; an optimist sees the opportunity in every difficulty."
Winston Churchill



Participating Faculty and Staff

Robert Smith	<i>Director, Department Head and Professor</i>	rsmith4@vt.edu
Henry Quesada	<i>Assistant Director and Associate Professor</i>	quesada@vt.edu
Bob Bush	<i>Professor, Sustainable Biomaterials</i>	rbush@vt.edu
Tom Hammett	<i>Professor, Sustainable Biomaterials</i>	himal@vt.edu
Earl Kline	<i>Professor, Sustainable Biomaterials</i>	kline@vt.edu
Angela Riegel	<i>Program Specialist, Sustainable Biomaterials</i>	ariegel@vt.edu

Mission

To assist the forest products industry by improving the management of their operations and the marketing of their products.



Proposals Funded:

Evaluating Vacuum and Steam Heat As A Methyl Bromide Alternate Phase Ii Control Of Pinewood Nematode In Pine And Oak Wilt In White Oak Logs, USDA NIFA, Department of Agriculture, Maximum Amount: USD 491,725, Amount Awarded to Date: USD \$491,725, Principal Investigators: Chen Zhangjing (40%), White Marshall S (40%), Eisenback Jonathan D (10%), Quesada Henry J (10%), Chen Z; Eisenback J; Quesada H; White M, 09/01/2019-08/31/2021

Refereed Publications:

Arias, E., H. Quesada and R. Smith. 2020. *Competitive Strategies for International Marketing of Hardwood Products Based on the Mining of Open Questionnaire Data*. *BioResources* 15(4), 7872-07892.

Pitti, A., Espinoza, O., & Smith, R. (2020). *The Case for Urban and Reclaimed Wood in the Circular Economy*. *Bioresources*. 15(3): 5226-5245.
Quesada, H., R. Smith, G. Berger and J. Loferski. 2020. *A Visual Assessment of Cross-Laminated Timber Structures in Austria*. *BioProducts Business* 5(5), pp51-62.

Quesada H; Mazzola J; Sherrard D. (2020). Implementing Experiential Learning in High School Agriculture and Forestry Curriculum: A Case Study in Guatemala. *Journal of Experiential Education*. doi:10.1177/1053825920926195

Quesada H; Fallas P; Navarro N; Madrigal-Sanchez J. (2020). A Supplier Selection Model for the Wood Fiber Supply Industry. *BioResources*, 15(1), 1959-1977.

Smith, R. and M. Rudnicki. (2020). Global Environmental Issues and the Circular Bioeconomy. *Science Teacher* 87 (8): 10-11.

Valverde PF; Quesada H; Bond B. (2020). A lean logistics framework: A case study in the wood fiber supply chain. *Wood and Fiber Science*, 52(1), 117-127.
doi:10.22382/wfs-2020-010

Pitti, A., Espinoza, O., & Smith, R. (2019). *Marketing Practices in the Urban and Reclaimed Wood Industries*. *Bioproducts Business*, 4(2), 15-26.

Smith, R. and P. Valverde. (2019). *The Current and Future State of Wood Science Education in the United States*. *Wood and Fiber Science*. January.



Trade Journal Publications Refereed:

Escobar (VT CNRE FWS, Faculty), L., Ignosh, J., Quesada, H., & Crowder, L. (2019). "Comunidades de Aprendizaje - Programa de Actualización Técnico Pedagógico de Docentes, Modulo 5: Mecanismos para una Actualización Permanente" [Learning Communities – Pedagogy Technical Teacher Professional Development, Module 5: Mechanisms for Continuous Professional Development], Workshop Web Resource Page. Retrieved from <https://sites.google.com/>

Gaspar (Teacher Development Academic Program Trainer, Huehuetenango, Guatemala), M., Ignosh, J., Quesada, H., & Crowder, L. (2019). "Coaching Educativo – Programa de Actualización Técnico Pedagógico de Docentes, Modulo 5: Mecanismos para una Actualización Permanente" [Educative Coaching – Pedagogy Technical Teacher Professional Development, Module 5: Mechanisms for Continuous Professional Development], Workshop Web Resource Page. Retrieved from <https://sites.google.com/>

Ignosh, J., Quesada, H., & Crowder, L. (2019). "Pinabete con Fines Navideños - Programa de Actualización Técnico Pedagógico de Docentes, Modulo 5: Contenido PLUS, Mecanismos para una Actualización Permanente" [Guatemalan Fir for Christmas Tree Production – Pedagogy Technical Teacher Professional Development, Module 5: PLUS Content, for Mechanisms for Continuous Professional Development], Workshop Web Resource Page. Retrieved from <https://sites.google.com/>

Quesada, H. (2019). Critical strategies to mitigate climate change: success and failures for Costa Rica. *Special issue for PreCOP25*. Retrieved from <https://www.ameliarueda.com/>

Quesada, H. (2019). New Grant to Continue to Pursue Hardwood Lumber for CLT. *National Hardwood Lumber Association*. Retrieved from <https://www.nhla.com/newgrant-to-continue-to-pursue-hardwood-lumber-for-clt/>

Quesada, H., & Fallas, P. (2019). Lean Thinking Tools Can Help Loggers and Sawmills Decrease Waste. *TimberLine Magazine*.

Quesada, H. (2019). Circular Economy to Save the Planet. *CRhoy.com*. Retrieved from <https://www.crhoy.com/>

Extension Publications:

SBIO extension newsletter, Editor of the SBIO extension newsletter, published three times per year, 2014-Present, Editor/curator

Sustainable Innovation Management (SIM) web page, Web manager and editor of the SIM web page, 2010-Present, Editor/curator



Other Publications:

Espinoza, Omar, Robert Smith and Anna Pitti. 2021. *International Marketing Practices for Small to Medium Sized Forest Products Firms*. University of Minnesota Press. In Press. 135 pages.

Quesada, H., Adhikari, S., & Bond, B. (2019). Hardwood Cross-Laminated Timber: Readiness of US Hardwood Lumber Manufacturers. In *Societe of Wood Science and Technology*. Tenaya Lodge. Fish Camp, California.

Quesada, H., Pomponi, J., & Smith, R. (2019). Drivers Impacting Supplying Decisions of Construction Companies: A Case Study in the Southeastern Region of the US. In *Society of Wood Science and Technology*. Tenaya Lodge. Fish Camp, California.

Quesada, H., & Brindley, C. (2019). How to Improve Inventory Management and Reduce Costs. *Pallet Enterprises*.

Graduate Thesis/Dissertations:

Juan Gonzalez, May 2020, Thermally-modified lumber, Henry Quesada (co-advisor)

Presentations:

Smith, R. 2019. *The Current State of Sustainable Biomaterials Programs in the US*. Presented to the faculty and administration of Michigan Technological University College of Forestry and Environmental Science. July.

Smith, R. 2019. *The State of Wood Science Education in the US*. Presented to the faculty and Administration of the University of Primorska in Koper, Slovenia

**Short Courses & Continuing Education:**

Date	Course name	# of Students	Description
June 2020	Information Technologies for Supply Chain Management	18	1 hour weekly meetings with industry participants. Cojointly organized with the School of Industrial Engineering at Costa Rica Tech. Virtual short course.
February 2020	Opportunities for American Hardwoods in the Eastern European Market	250	Presentation at the 2020 Indiana Hardwood Lumber Association (IHLA).
January 2020	Opportunity for the Hardwood Industry into the CLT market	15	Provided to the NextGen Leaders Council of the Hardwood Manufacturers Association. Online lecture.
October 2019	Basics of Thermally-modified wood	19	Department of Forestry of Virginia. Charlottesville, VA.
September 2019	101 Wood Basics/NAWLA	45	
August 2019	Experiential Learning for Agroforestry High School Teachers	148	

Courses Taught:

SBIO 3464 Forest Products Business
Semester: Spring 2020
Credit Hours: 3
Instructor(s): Henry Quesada
No of students: 56

SBIO 5004 Seminar
Semester: Spring 2020
Credit Hours: 1
Instructor(s): Bob Smith

SBIO 5614 Forest Products Marketing and Management
Semester: Fall 2019
Credit Hours: 3
Instructor(s): Bob Smith and Henry Quesada

SBIO 5974 Undergraduate Research
Semester: Fall 2019
Credit Hours: 3
Instructor(s): Henry Quesada
No of students: 1



Members

Appalachian Hardwood Manufacturers, Inc.

PO Box 427, High Point, NC 27261

Phone: (336) 885-8315; **Fax:** (336) 886-8865

Email: tom@appalachianwood.org; **Website:** www.appalachianwood.org

Contact: Tom Inman, President

AHMI is an association that promotes logs, lumber and products from the Appalachian region.

Atlanta Hardwood Corporation

5596 Riverview Road, Mableton, GA 30126-2914

Phone: (404) 792-2290; **Fax:** (404) 792-2294

Email: ahc@hardwoodweb.com; **Website:** www.hardwoodweb.com

Contacts: James W. Howard, Jr., President; Marty Payny, Sales Manager; and Patrick G. Altham, VP Export

Products: boards, common; boards, select; flooring; moulding

Species: alder, ash, basswood, beech, cherry, hickory, imported hardwoods, mahogany, hard maple, soft maple, white maple, red oak, white oak, poplar, walnut, eastern white pine

Baillie Lumber Company

PO Box 6, Hamburg, NY 14075

Phone: (716) 649-2850; **Fax:** (716) 649-2811

Email: information@ballie.com; **Website:** www.baillie.com

Contacts: Jeff Meyer, President; Kenneth A. Philbrick, Yard Operations Manager

Products: boards, common; boards, select

Species: ash, basswood, beech, birch, cherry, red elm, hickory, hard maple, soft maple, red oak, white oak, poplar, walnut



Bingaman & Son Lumber, Inc.

PO Box 247, Kreamer, PA 17833

Phone: (570) 374-1108; **Fax:** (570) 374-5342

Email: cbingaman@bingamanlumber.com; **Website:** www.bingamanlumber.com

Contacts: Chris Bingaman, Vice President Operations/Sales Manager

Products: boards, common; boards select; glued-up stock; furniture dimension

Species: ash, basswood, birch, cherry, hickory, mahogany, hard maple, soft maple, red oak, white oak, poplar, black walnut, eastern white pine

Boehm-Madisen Lumber Co., Inc.

PO Box 906, Brookfield, WI 53008-0906

Phone: (262) 544-4660; **Fax:** (262) 544-0795

Email: boehmmad@execpc.com

Contacts: Thomas J. Kestly, Sr.

Products: boards, common; boards, select; flooring; timbers; cutstock; log cabin siding; glued-up stock; pattern stock; decking, laminated; decking, roof; dimension, furniture; dimension, precut; edge-glued products;

Danzer Group

Danzer Veneer Americas, PO Box 3455, Williamsport, PA 17701

Phone: (570) 322-4400; **Fax:** (570) 322-7213

Email: vijay_reddy@danzervenveer.com; **Website:** www.danzervenveer.com

Contact: Dr. Vijay Reddy, Vice President, (724) 827-8366 Darlington, PA.

Products: veneers for panel, furniture, door, cabinet, edge-banding and flooring, dimension, dry; cutstock; glued-up stock; moulding; fingerjoint stock; furniture dimension; window & sash stock

Species: white ash, aspen, basswood, birch, cherry, black cypress, hickory, hard maple, poplar, red oak, soft maple, white maple, white oak, walnut ash



Fitzpatrick & Weller, Inc.

PO Box 490, Ellicottville, NY 14731-0490

Phone: (716) 699-2393; **Fax:** (716) 699-2893

Email: sales@fitzweller.com; **Website:** www.fitzweller.com

Contacts: Dana Fitzpatrick, Executive Vice President

Products: boards, common; boards, select; dimension, dry; glued-up stock; moulding; dimension, furniture

Species: ash, white ash, basswood, beech, birch, cherry, hickory, maple, hard maple, soft maple, white maple, red oak, white oak, poplar, hemlock, eastern white pine

Frank Miller Lumber Company, Inc.

1690 Frank Miller Road, Union City, IN 47390

Phone: (765)-964-3196; **Fax:**(765)-964-6618

Email: clea@frankmiller.com; **Website:** www.frankmiller.com

Contacts: Martha Miller Mathias – President, CEO, COB

Products: boards, common; boards, select; dimension, green, quarter rift lumber

Species: white ash, basswood, beech, cherry, elm, hackberry, hard maple, soft maple, white maple, red oak, white oak, yellow poplar, black walnut

Hardwood Manufacturers Association

665 Rodi Road, Suite 305, Pittsburgh, PA 15235

Phone: (412) 244-0440; **Fax:** (412) 244-9090

Website: info@hardwood.org

Contacts: Linda Jovanovich

HMA is an association that assists the furniture, flooring, kitchen and bath, and moulding and woodwork industries with hardwood information.



Hardwood Market Report

PO Box 2633, Memphis, TN 38088-2633

Phone: (901) 767-9126; **Fax:** (901) 767-7534

Email: hmr@hmr.com; **Website:** www.hmr.com

Contact: Judd Johnson, Editor

Hardwood Market Report, established in 1922, is a weekly publication giving benchmark pricing information and marketing commentary on North American hardwood lumber and the hardwood products industry

Industrial Timber & Lumber Company

23925 Commerce Park, Beachwood, OH 44122

Phone: (216) 831-3140; **Fax:** (216) 831-4734

Email: sales@itlcorp.com; **Website:** <http://www.itlcorp.com>

Contacts: Larry Evans, President

ISK Biocides, IBC manufacturing

416 E. Brooks Road, Memphis, TN 38109-0158

Phone: (901) 344 5350; **Fax:** (901) 344 5387

Email: info@ibio.com

Contact: Joe Ignatoski, President , COO; Lance Johnson, District Sales Supervisor

Products: sap stain and mold preventatives; industrial wood preservatives; WOODguard and Natural Home--wood protection for the homeowner.

Jim C. Hamer Company

PO Box 418, Kenova, WV 25530

Phone: (304) 453-6381; **Fax:** (304) 453-6587

Email: idearing@jimchamer.com; **Website:** www.jimchamer.com

Contacts: Steve Hamer, President

Products: boards, common; boards, select; dimension, furniture

Species: ash, beech, hard maple, soft maple, red oak, white oak, poplar



Spartanburg Forest Products, Inc.

1431 Highway 101 South, Greer, SC 29651

Phone: (864) 699-3100; **Fax:** (864) 699-3101

Email: smichael@gsonline.net; **Website:** www.sfpinc.biz

Contact: Stephan W. Michael, President/CEO

Spartanburg Forest Products, Inc. is a marketing and management organization, focusing in treated and engineered wood products.

T & S Hardwoods, Inc.

Harrisburg Road, PO Box 1233, Milledgeville, GA 31059

Phone: (478) 453-3492; **Fax:** (478) 453-9002

Email: dsmith@tshardwoods.com; **Website:** www.tshardwoods.com

Contacts: Larry N. Thompson III., President

Products: boards, common; boards, select; dimension, green; railroad ties; timbers

Species: brown ash, cherry, cottonwood, soft elm, sap gum, hickory, soft maple, red oak, white oak, pecan, yellow poplar, sycamore, black walnut, cedar, cypress

USDA Forest Service

Northern Research Station, 180 Canfield St., Morgantown, WV 26505

Phone: (304) 285 – 1500

Contact: Ed Cesa, Research Scientist

USDA Forest Service

Southern Research Station, 1650 Research Center Dr., Blacksburg, VA

Phone: (540) 231 – 5341

Contact: Phil Araman, Senior Research Scientist



Virginia Forest Products Association

220 East Williamsburg, PO Box 160, Sandston, VA 23150-0160

Phone: (804) 737-5625; **Fax:** (804) 737-9437
Email: vfpa@att.net; **Website:** www.vfpa.net

Contact: Susan Seward

VFPA is an association active in promoting state and local codes and regulations developed to provide safety to life and property from the hazards of fire.

W. M. Cramer Lumber Company

PO Box 2888, Hickory, NC 28603

Phone: (828) 397-7481; **Fax:** (828) 397-3763
Email: wmc@cramerlumber.com; **Website:** www.cramerlumber.com

Contact: Wendell Cramer, President

Products: boards, common; boards, select

Species: poplar, red oak, white oak, ash, hickory, beech, soft maple, cherry, hard maple, elm, basswood, chestnut, mahogany, white pine, ponderosa pine

Wood Preservers, Inc.

PO Box 158, Warsaw, VA 22572

Phone: (804) 333-4022; **Fax:** (804) 333-9269
Email: mwright@woodpreservers.com; **Website:** www.woodpreservers.com

Contact: Morgan Wright, President

Products: boards; softwood dimension; timbers; ties

Species: loblolly pine, longleaf pine, shortleaf pine