

2023 Industrial Hemp Conference

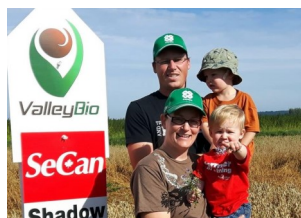
VIRTUAL on Thursday, February 23, 2023, 8:45 a.m. to 4:45 p.m.

The **University of Vermont Extension Northwest Crops and Soils Program** and the **Vermont Agency of Agriculture, Food & Markets** invite you to the **Fifth Annual Industrial Hemp Conference!** This event will be held virtually on Thursday, February 23, 2023, 8:45 a.m. to 4:45 p.m.

Access Conference Details and Registration at

<http://go.uvm.edu/2023industrialhempconference>

SPEAKER HIGHLIGHTS: Reuben and Keanan Stone are a husband and wife team of growers, cleaners, and sellers of seed in the Ottawa Valley, Canada. The Stones have become local leaders in seed production, crop research, conditioning, seed treatment, and industry development through their business operations, UniSeeds Inc., Valley Bio Limited and Stone Farms.

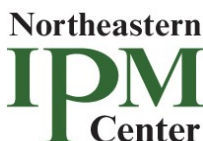


James Forbes is the co-founder of Tiger Fiber in St. Louis, MO and will share information on utilizing hemp fiber as an alternative to plastics, cotton, lumber, and cement.

Cost is \$50 per registrant. Registration is online at <https://go.uvm.edu/2023hempregistration> or you can contact the UVM University Event Services Office, 802-656-5665 ext. 3

Please register by Noon, February 21, 2023. Prior to the conference, you will receive an email with the conference link.

Certified Crop Adviser CEUs will be available. Credit information is noted on the Agenda in this brochure.



If you require an accommodation related to a disability, please contact UVM Student Accessibility Services at access@uvm.edu or (802) 656-7753.

KEY SPEAKERS



Victory Hemp Foods Founder and CEO **Chad Rosen** will talk about the future of hemp foods.

Guy Carpenter, President of Bear Fiber Inc. will present on developing a hemp fiber enterprise.



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COLLEGE OF AGRICULTURE AND LIFE SCIENCES

Thursday, February 23, 2023

Time	
8:45 am—9:00 am	Welcome — Heather Darby, University of Vermont Extension
9:00 am—9:40 am	Hemp Regulatory Updates and Vermont Cannabis Board Update - USDA Hemp Program Bill Richmond, VAAFM Stephanie Smith, and Vermont Cannabis Board Brynn Hare.
9:40 am—10:20 am	UVM CBD Economics and Markets - Jane Kolodinsky, UVM College of Community and Applied Economics and Tyler Mark, University of Kentucky. CEU PD 1.0 credit available for 9am to 10:20am sessions
10:20 am—10:30 am	Break
10:30 am—11:15 am	Future of Hemp Foods —Chad Rosen, Victory Hemp Foods
11:15 am—12:00 pm	Breeding new hemp grain and fiber cultivars – opportunities and challenges —Larry Smart, Cornell University
12:00 pm—12:30 pm	Lunch. Grab lunch and join in to hear the Student-Led 3 minute Lightning Talks from 12:10 to 12:30 pm —led by Steven Kostell.
12:30 pm—1:45 pm	Grower Intensive for Grain and Fiber —Reuben and Keanan Stone, UniSeeds, Ontario CEU CM 2.5 credits available for 10:30am to 1:45pm sessions (excluding lunch)

Afternoon—two tracks with two links to choose from.

	FIBER SESSION	FLOWER SESSION
2:00 pm—2:45 pm	Developing a Hemp Fiber Enterprise —Guy Carpenter, Bear Fiber Inc.	Scaling in the Hemp Cannabinoid Market: Hidden Challenges —Grayson Glosser, X-Tract VT
2:45 pm—3:30 pm	Tiger Fiber —James Forbes, co-founder	CBD Fertility and Cover Crop Management Research Trial Updates - David Suchoff from NC State
3:30 pm—4:15 pm	Inquiry of Community Supported Linen , Patricia Bishop, Taproot Fibrelab	Effects of Weed Management Measures —John Jemison, University of Maine
4:15 pm—4:45 pm	UVM Fiber Updates —UVM’s Steve Kostell and Laura Sullivan	UVM Hemp Research Updates —Heather Darby and John Bruce
	CEU PD 1.5 credit and CEU CM .5 credit for this full track	CEU PD .5 credit, CEU IPM .5 credit, and CEU CM 1 credit for this full track

Certified Crop Adviser (CCA) CEU categories – CM, Crop Management; IPM, Integrated Pest Management; and PD, Professional Development.

Bios from presenters, listed alphabetical by last name

Patricia Bishop is the co-owner of TapRoot Farms and Fibre lab. As a lifelong farmer, Patricia had ample experience feeding her community fruits, vegetables, and meat when she started to dream of ways to grow clothes as well. She and her partner Josh Oulton planted their first flax crop in 2012 and have since grown their operation to include bast fiber extraction equipment, a spinning mill, and an entire international community of bast fiber enthusiasts.

Patricia's presentation will discuss the realities of building community supported linen from the seed to the shelf, and draw parallels between flax and hemp; two types of long line bast fiber.

John Bruce is an Extension Research Specialist at the University of Vermont and focuses on applied hemp research. He works with hemp growers on a variety of agronomic topics.

Guy Carpenter is President of Bear Fiber Inc., who is leading the nation in producing American grown hemp fiber products at his facility in Morganton, North Carolina. Bear Fiber cleans, refines, blends, and upgrades American Hemp Fiber for short staple spinning, knitting, and weaving for the American textile/apparel industry. Guy's expertise comes from his many years abroad researching hemp textiles in China and Europe.

Guy Carpenter's presentation will chronicle his extensive journey into hemp fiber that crossed several continents and landed in North Carolina, where he operates Bear Fiber Inc and fosters community and connectivity within the budding U.S. hemp market.

Dr. Heather Darby is an Agronomist with UVM Extension. Heather developed the UVM Hemp Program in 2015. She has conducted research on industrial hemp including projects to identify best management practices for grain, fiber, and flower production. Heather has also developed the first undergraduate hemp course for the UVM Plant and Soil Science Department.

James Forbes is the co-founder of Tiger Fiber out of St. Louis, MO. Tiger Fiber's mission is to disrupt mass markets for Global Good by utilizing hemp fiber as an alternative to plastics, cotton, lumber, and cement. James believes hemp fiber may also serve farmers who are interested in rotating their fields of corn and soy, and has created a market for Midwestern fiber hemp farming where non previously existed.

James's focus will trace his relationship with hemp farmers in the Midwest and discuss how Tiger Fiber is changing the midwestern landscape to include more industrial hemp.

Grayson Glosser is the Director of Production at X-Tract VT in St. Albans. They are a Tier 3 cannabis manufacturing facility that focuses on cannabis extraction, product formulation and production, and packaging and labeling.

Grayson's presentation will discuss extraction techniques, their strengths, weaknesses, output products and impact of end product production. He will also discuss how upcoming regulations may effect these products, processes, and industry.

Brynn Hare is the Executive Director of the Vermont Cannabis Control Board. She is an experienced legislative and civil litigation attorney with expertise in criminal and juvenile justice, constitutional law, public health and safety, and police reform. Prior to joining the VT Cannabis Board, Brynn served as Legislative Counsel with the Vermont Office of Legislative Counsel, working most frequently on criminal and juvenile legal system reform legislation.

Prior to arriving in Vermont, she litigated patent, trademark, and complex civil cases with the New York office of Ropes & Gray, LLP. Brynn is a graduate of Mount Holyoke College and Fordham University School of Law.

Brynn will share updates on the Vermont Cannabis Board.

John Jemison is an Extension Professor of Soil and Water Quality at the University of Maine. John develops and delivers educational programs designed to encourage growers and homeowners to implement practices to improve soil quality and protect surface and ground water supplies. With projects like the Orono Community Garden, he teaches volunteers what it takes to grow food, understand civic agriculture and the benefits of local food systems. John's agricultural research focuses on nutrient and weed management strategies to improve productivity, reduce risk to water quality, reduce tillage to improve soil quality, and increase local food production. He serves on the Maine Board of Pesticides Control, and he is also a cooperating professor in the School of Food and Agriculture.

Presentation Title: Do weed management measures effect resinous hemp yield, quality, cannabinoid production?

Jane Kolodinsky, Ph.D. is a Professor, Director of the Center for Rural Studies, and Associate Dean of Research in CALS at the University of Vermont. Her research program is best described as being focused on controversial food system policy issues. A current foci is the resurgence of hemp in the U.S. economy. The University of Vermont, Colorado State, University of Kentucky and University of Alberta research teams have current projects related to the economic impact of hemp, consumer demand for hemp (and other novel crop) products, the hemp retail landscape, and developing food system metrics related to economics, the environment and communities.



United States Department of Agriculture
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Steven Kostell is an Assistant Professor at the University of Vermont Community Development and Applied Economics department. Steve is an intermedia artist & designer whose work explores the convergence of traditional and experimental techniques in print and digital media, resulting in hybrid forms. His work is grounded in material-based production and digital image processing, involving papermaking, printmaking, artist books, and multi-channel audio/video installations and interactive methods of social practice. Collaborative materials research focuses on the regional hemp fiber development; linking production, processing and manufacturing through regenerative materials and sustainable practices.

Tyler Mark is an associate professor of production economics in the Department of Agricultural Economics at the University of Kentucky. His applied research interests include hemp economics, broadband availability in rural areas, precision agriculture, and precision dairy. Current projects include the economic impact of hemp production, hemp cost of production, factors that impact the profitability of Kentucky farmers, broadband internet's impact on precision agriculture data transmission, and the development of the Kentucky economy.

Tyler will share information on the NASS survey that was done and hemp economics and markets.

Bill Richmond, Chief of the USDA Hemp Program, leads the team responsible for the establishment and implementation of the U.S. domestic hemp production program. He was the first USDA employee to work solely on hemp following the passage of the 2018 Farm Bill and is responsible for State and Tribal Government hemp regulations, rulemaking, intergovernmental affairs, and stakeholder outreach. He has been in Federal service, all with USDA, for over 22 years. Bill studied agricultural economics at the University of Maryland and holds professional certificates from the Harvard Kennedy School of Government and the Brookings Institution.

Bill will share updates and information on the USDA Hemp Program.

Chad Rosen is the Founder & CEO of Victory Hemp Foods and has led his company's growth over the past six years, as well as worked as an industry-wide advocate within the U.S. hemp grain supply chain and market. Victory Hemp Foods is a business-to-business primary food ingredient processing company that develops innovative technology to manufacture hemp grain into premier proteins and healthy

fats for applications in food and beverage, skincare and cosmetics, and nutritional supplements. Victory Hemp Foods won the 2020 Hemp Innovation Challenge™ at the World Ag Expo® in Tulare, CA for the development of two proprietary ingredients, V-70™ Hemp Heart Protein and V-ONE™ Hemp Heart Oil.

Chad will talk about the future of hemp foods.

Larry Smart is Professor of Plant Breeding and Genetics in the Horticulture Section of the School of Integrative Plant Science at Cornell University and is based at Cornell AgriTech in Geneva. He is a plant geneticist and breeder who uses genomic tools to understand the biology of crop production. His group is breeding improved cultivars of hemp for grain, fiber, and cannabinoids; varieties of shrub willow for bioenergy and carbon sequestration; and hop varieties for craft breweries in New York. His research focuses on hybrid vigor, sex determination, and disease resistance. He earned a BS in Biology from Cornell University, PhD in Genetics from Michigan State University, and was an NSF post-doctoral fellow at UC Davis.

With a surge in interest in hemp grain and fiber product development, it is critical to develop improved hemp cultivars that are adapted to emerging regional production areas and systems. Cornell University has established a long-term hemp breeding program, and they are working with USDA-ARS to rebuild the national hemp germplasm collection. They have been evaluating commercial hemp cultivars over the last six years for grain and retted straw production and are making progress in developing new hemp cultivars. This presentation will provide an overview of Cornell's breeding goals for hemp, an update on their accomplishments in establishing a breeding program, and key challenges that they still need to overcome to help launch a successful hemp enterprise in the US.

Stephanie Smith is the Assistant Director for the Public Health and Agricultural Resource Management Division at the Vermont Agency of Agriculture, Food & Markets. She develops and implements policies and programs that support the hemp and plant health industries. She holds a Bachelor of Arts in Environmental Studies from Boston University and a Master of Landscape Architecture from the University of Georgia.

Stephanie will talk about the State of Vermont Hemp Program and about the transition from state to USDA programs.



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Reuben and Keanan Stone are from UniSeeds Inc. in Ontario, which specializes in the development, evaluation and supply of industrial hemp seed for dual purpose (grain+fiber) and fiber-specific production scenarios. The Stones also run the 4th generation Stone Farms, which has been targeting production of specialty crops like hemp and cover crop seeds since 2009, as well as Valley Bio Limited, a registered seed establishment that conditions and packages seed from the field to deliver high quality planting products to farms across Canada and the USA.

Reuben and Keanan will present on a grower intensive for both grain and hemp fiber production.

David Suchoff is an Assistant Professor and Alternative Crops Extension Specialist at North Carolina State University Extension. David is also the Director of the Hemp Research Consortium, which is designed to align research-intensive and land grant universities' research efforts with the hemp industry.

Presentation title is "Research trial updates: floral hemp polyploidy and leguminous cover crops as nitrogen fertilizer alternatives" and will cover results from two floral hemp field trials. The first was an investigation of the pollen sensitivity and potential agronomic benefits of triploid floral hemp compared to common diploids. The second trial investigated the use of fall-planted leguminous cover crops as a nitrogen fertilizer alternative for floral hemp grown in bare ground and plasticulture systems.

Laura Sullivan is a fiber artist and farmer working intimately on the UVM Extension Northwest Crops & Soils Program's hemp fiber research trials at the Border-view Research Farm. With a goal of reviving local fibersheds in the northeast, Laura is deeply interested in disrupting our runaway carbon emissions trajectory through a closed loop textile market where farmers are paid a premium for their raw materials grown with environmental integrity.

Student-Led 3 minute Lightning Talks during lunch

Agricultural Transition through Transformative Practices in Rural Economies

Participants from the summer 2022 USDA sponsored Research and Extension Experiential Undergraduate Learning Fellowship (REEU) will present their findings in areas of Production, Economics, Design, and Plant Science. Presenters include Elizabeth Greene, Tykera Moore, Nestia Nuanez, and Jerryan Richard.

NORTHWEST CROPS & SOILS PROGRAM



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2023 INDUSTRIAL HEMP CONFERENCE

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