2022 Grain Grower Series

The <u>Northern Grain Growers Association</u> and the <u>University of Vermont Extension</u> <u>Northwest Crops and Soils Program</u> are bringing our Grain Growers Conference to you!

Three virtual programs are being offered over the course of three weeks with a series of videos, presentations, and hands-on activities, each highlighting a specific grain crop in the Northeast.

Resilience in Rye—<u>REGISTER HERE</u>

- ⇒ Tuesday, March 22: 11:30am-1:00pm: Ecological Rye Production with Sandy Syburg of White Oak Farm in Wisconsin
- ⇒ Thursday, March 24: 11:30am-1:00pm: Conditioning, Aeration, and Storage of Grain with Don Hosteler of Brock Grain Systems in Indiana

Dynamic Dry Beans—<u>REGISTER HERE</u>

⇒ Wednesday, March 30: 12:00-1:00pm: Dry Beans with Heather Darby of UVM Extension & Sarah Pethybridge, Kristen A. Loria, and Matthew Ryan of Cornell

The Anatomy of Wheat Flour—<u>**REGISTER HERE</u></u> (must register by 3/28/22; includes box of materials for hands-on participation)</u>**

- ⇒ Tuesday, April 5: 11:30 am-1:00pm: PART 1—From the Field to the Lab with Heather Darby of UVM Extension, Carrie Brisson of King Arthur, Randy George of Red Hen Baking Co., and Jeffrey Hamelman of King Arthur
- ⇒ Wednesday, April 6: 11:30am-1:00pm: PART 2—From the Mill to the Bakery with Andrew Heyn of New American Stone Mills

See the following pages for more details on the events and speakers!

Questions? Contact Susan.Brouillette@uvm.edu or call 802-524-6501 ext. 432. For more information: <u>http://go.uvm.edu/conferences</u>

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



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www.uvm.edu/nwcrops



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COLLEGE OF AGRICULTURE AND LIFE SCIENCES

Resilience in Rye

Rye has great potential as a grain crop for Vermont and the Northeast and we have only scratched the surface. Many farmers know it and grow it as a cover crop. But it also yields well and makes great tasting food and beverages, as it can be milled into flour or used whole or cracked in many recipes that local bakers and consumers love! This program introduces you to growing rye for human consumption and for seed, the Rye Revival organization, and post-harvest handling and conditioning.



On Tuesday March 22nd, join Sandy Syburg, farmer and co-owner of White Oak Farm, an organic farm in southeastern Wisconsin. An award-winning farmer educator, Syburg has advised many community and school garden projects in WI, MI and IL and consulted with growers throughout the Americas and Europe, advocating that the quality of the food we eat is directly related to the quality of the soils it's grown on. Hear about Sandy's work with rye, growing rye for seed, and the Rye Revival. Rve Revival's organizational mission is as follows, "We support and expand ecological rye production; educate about rye for human, animal, and agricultural purposes, advance research on rye, and promote the enjoyment of rye to advance health, equity, and culture."

On Thursday March 24th, join Don Hosteler, Product Specialist focused on Grain Conditioning Systems at Brock Grain Systems in Milford, Indiana. While Don's primary focus is with the aeration systems, he also provides daily product support for all of Brock's grain storage products which include the grain silo's, grain handling equipment, and grain conditioning equipment. This presentation will cover the various grain aeration methods for drying and long-term storage. Improper grain conditioning can lead to grain deterioration, resulting in unusable grain. Not all grains are the same so we will review how grain types effect aeration needs. We will also discuss how to dry grain at different times of the year.





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Dynamic Dry Beans

Dry beans (Phaseolus spp.) come in a wide variety of shapes, colors, and sizes. The edible field bean is considered a grain legume crop that is well suited for our climate but requires good soil quality and diverse crop rotations. Beans are a staple food for much of the world due to their high protein content (generally 22% to 24%). They can serve as a great addition to a grain rotation and are a highly marketable crop. Dry beans are harvested once the shell and bean have matured and dried.

Join us on Wednesday, March 30th from 12pm to 1pm for a dry bean-focused webinar! Heather Darby will kickoff our meeting introducing a dry bean project with UVM Extension and Cornell!

Join Matthew Ryan for New Tools for Weed Control in Organic Notill Crop Production . Matt will present results from 2021 field research comparing dry beans planted into tilled soil to dry beans that were no-till planted into rolled-crimped cereal rye. He will also discuss an experiment that tested the efficacy of inter-row mowing and weed zapping on late season weed control in no-till planted soybean. Preliminary results show that the inter-row mower in particular is an effective tool for managing weeds in notill systems.

Sarah Pethybridge will close out our meeting discussing the potential of cereal rye mulch to suppress white mold in no-till dry beans. White mold, caused by the fungus, Sclerotinia sclerotiorum, is a serious disease of dry bean. In conventional dry bean production, synthetic fungicides are routinely used for disease management. These fungicides are applied to protect the flowers from infection. In this research, we evaluated the potential of cereal rye mulch to suppress white mold in no-till dry bean by preventing the germination of sclerotia that survive in the soil.









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The Anatomy of Wheat Flour

Wheat was once grown in the northeast in great quantities, and is a strong part of our heritage. With an increase in demand for local foods (including flour, bread, and other baked goods), there has been a recent and exciting resurgence of wheat production. We hope to see even more opportunities for growers, millers, bakers, and consumers to enjoy locally-grown wheat here in our northern climate. There are a few different types of wheat grown in the northeast:

- ⇒ Soft wheat, which is high in starch and good for pastry flour, can be either white or red winter wheat
- \Rightarrow Hard wheat, which can be spring-seeded or fall-seeded but is usually red, is high in protein and gluten and makes good bread flour.
- \Rightarrow Winter wheats, planted in late summer or fall and harvested the next summer, generally produce more grain and straw than spring wheats, and control spring weeds more efficiently because of their height advantage.
- \Rightarrow Spring wheats are planted in spring and harvested in fall, and often produce higher quality grain with lower yield.

Must register by March 28 to receive the supply participation box

On Tuesday April 5th, Heather Darby of the University of Vermont Extension will begin by discussing the Northwest Crops and Soils Program's research on wheat. Dr. Darby will highlight testing, quality, and the impacts of various field management practices. Next Carrie Brisson (King Arthur Baking Company), Randy George (Red Hen Baking Company), and Jeffrey Hamelman (Certified Master Baker and author) will show how differences in grain quality affect outcomes in the bakery.





On Wednesday April 6th, Andrew Heyn, co-owner of New American Stone Mills, will present on stone milling. See millstones in various stages of the cutting process. This will lead to a discussion of how the grain is pulverized in the stones and how cutting stones differently produces different results. We will also discuss the bolting process and the difference between extraction rate and ash content. New American Stone Mills continuing goal: "to build a worldwide community of bakers who use only fresh-milled flour in their products, sourcing grain from local farmers. to deliver the fullest nutrition and flavor to their customers."



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Program Speakers

Carrie Brisson is head baker at King Arthur Baking Company.

Heather Darby is a Professor of Agronomy at the <u>University of</u> <u>Vermont Extension</u>. She has been working with grain growers in the Northeast for the past 19 years to grow a viable local grain economy. Her research and outreach programs provide regionally adapted information to growers throughout the region.

Randy George founded and co-owns <u>Red Hen Baking Company</u> in Middlesex, Vermont. In operation since 1999, Red Hen specializes in certified organic, hearth-baked breads. For over 22 years, Randy has worked closely with VT farmers to improve the baking-quality of their wheat. Currently, 95% of the wheat that is used at Red Hen comes from four farms located within 150 miles of the bakery. Randy is an NGGA board member and regularly participates in bake-tests of local grain for UVM Extension.

Jeffrey Hamelman is the author of <u>BREAD: A Baker's Book of</u> <u>Techniques and Recipes</u> and a recipient of the <u>Bread Baker's Guild</u> Golden Baguette Award. He's one of a limited number of Certified Master Bakers in the United States and a past captain of Baking Team USA. He was an employee owner at the <u>King Arthur Baking</u> <u>Company</u> for 17 years, opening and directing the King Arthur Flour Bakery, and developing and teaching the professional classes for the Baking School. He now shares his knowledge and decades-long commitment to baking by teaching students around the world, and loves the opportunities this affords him to learn from others.

Andrew Heyn owns <u>Elmore Mountain Bread</u> with his wife, Blair Marvin in Northern Vermont. They bake wood-fired breads using stone ground local grain. Andrew designed and built his own mill for their bakery, and a few years later started <u>New American Stone Mills</u> to provide bakers with natural granite stone mills. Now he has setup over 100 mills around the world for bakers, millers and farmers.

Don Hosteler was born and raised on a small 80-acre lowa family farm where they raised cattle, hogs, and had an 8,000-bird cagelayer chicken house. Don's interest in farm equipment led him to an associate degree in Ag Mechanics, followed by 15 years as an ag mechanic with a focus on troubleshooting engine and hydraulic system issues. In 1995 Don graduated from Iowa State University with a bachelor's degree in Engineering Technology. In 2008 Don joined <u>Brock Grain Systems</u> in Milford, Indiana as a Product Specialist, focused on Grain Conditioning Systems. Don assists Brock Bin dealers planning of aeration systems for new grain storage facilities. He also participates in product improvement reviews to improve the performance of existing aeration products as well as developing new products for the ever-growing grain storage

facilities. Don also develops and provides aeration training for Brock's annual dealer training program. While Don's primary focus is with the aeration systems, he also provides daily product support for all of Brock's grain storage products which include the grain silo's, grain handling equipment, and grain conditioning equipment.

Sarah Pethybridge is a plant pathologist based at Cornell AgriTech, Geneva, New York. She joined Cornell University in 2014 after a 15 year career in the southern hemisphere! She received her Bachelor of Agricultural Science with Honors and Doctor of Philosophy in Plant Pathology from the University of Tasmania, Australia. She was then an extension plant pathologist working on diseases of hops, pyrethrum, and vegetables with the Tasmanian Institute of Agricultural Research for 10 years before joining the Australian pyrethrum industry as their Agricultural Research and Development Manager for an additional five years. Afterwards, she was a Science Group Leader for Field Crops for the New Zealand Institute of Plant and Food Research for several years before landing in New York. Her program at Cornell University is research and extension based, focusing on the epidemiology and management of diseases affecting vegetables, particularly leguminous crops (snap and dry beans), table beet, carrots and cucurbits. She works in organic and conventional production systems and today she will talk about her work on cover crops to control a particularly recalcitrant soilborne disease, white mold, in dry beans and soybeans.

Matthew Ryan is an Associate Professor of Sustainable Cropping Systems at Cornell University where he studies agroecology and works with farmers, students, and other researchers to evaluate cropping system performance in terms of crop yield, profitability, environmental impact, and resilience. His research is largely focused on overcoming obstacles that limit cover crop adoption and reducing tillage in organic field crop production.

Sandy Syburg is a farmer and co-owner of White Oak Farm, an organic farm in southeastern Wisconsin that never transitioned to agrichemical farming. Growing up on this farm, Sandy grew an appreciation for "feeding the soil." He founded <u>Purple Cow Organics</u>, a compost and soil amendment company, which he ran for over 30 years. He serves on the Grower Executive Committee of <u>CROPP</u>, the nation's largest and most successful organic farmer cooperative, now known as Organic Valley. An award-winning farmer educator, Syburg has advised many community and school garden projects in WI, MI and IL and consulted with growers throughout the Americas and Europe, advocating that the quality of the food we eat is directly related to the quality of the soils it's grown on.

Register online for <u>Resilience in Rye</u>, <u>Dynamic Dry Beans</u>, and/or <u>The Anatomy of Wheat Flour</u>!

Or you can call UVM's Non-Credit Registrar's Office, 802-656-8407.

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