



Growing Hybrid Hazelnuts: The New Resilient Crop for a Changing Climate

By Philip Rutter, Susan Wiegrefe, Dr. Brandon Rutter-Daywater

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Civilization is facing global threats like never before. Climate instability. Food insecurity. The endangered family farm. Water pollution and scarcity. Mass extinction. Converting agricultural land into more secure, climate-stabilizing, water-filtering, wildlife-harboring farms would be positively transformative. Luckily, there *is* a way, currently under development, to do just this in many temperate climates: hybrid hazelnuts.

Growing Hybrid Hazelnuts is the first comprehensive guide for farmers interested in how to get started growing hybrid hazelnuts, a crop designed from the very outset to address a host of problems with conventional modern agriculture. Once hybrid hazelnuts are established, no plowing, or even cultivation, is necessary. Dramatically improved infiltration rates prevent water from running off of fields, regardless of soil type. The crop's extensive, permanent root systems—at work 365 days a year?—mean that tilling should not be necessary in moderately wet soils, and that no fertilizer can escape into groundwater. No soil is lost to wind or rain; in fact, this crop builds soil, and wildlife finds cover and food in hazelnuts all year. Economically speaking, hazelnuts have a large, existing, and unsatisfied world market, not to mention their processing potential is even greater than soybeans. They are, without a doubt, the ecological crop of the future.

This book covers everything you need to know about NeoHybrid hazels, the new biological entity developed by the authors, including:

- The source of the species and the making of an artificial, directed hybrid swarm;
- The historical use of hazels as a staple food in Europe and Asia;
- The nutrient composition of the crop;
- The benefits of woody agriculture and the superior productivity of these hazels;

- Site requirements: slope, soils, soil tests;
- Planting and the establishment period;
- Managing the productive plantation, including maintaining biodiversity;
- When to harvest, and harvesting options (hand or machine);
- Processing, from harvest to market: drying, husking, cleaning, sizing, cleaning, roasting;
- Value-added options (oil, meal, nut butters);
- Co-products and their values (wood, shells, husks, sub food-grade nuts, biodiesel);
- The state of the world hazel market, and more

The first and only guide of its kind, *Growing Hybrid Hazelnuts* will appeal to small-scale and commercial farmers, both those already familiar with concepts of perennial agriculture and those interested in converting from conventional practices. *Growing Hybrid Hazelnuts* is a landmark book for the farming movement, offering a practical road to a hopeful future where crops build soil and the earth is regenerated, at the same time reaping profits for the farmer.

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Editorial Review

Review

Booklist-

"In Western industrial nations, hazelnuts offer a familiar flavoring to confections such as pralines and popular aromatic coffees. If the authors of this distinctive horticultural guide have their way, however, hazelnuts will also be bred to resist the ravages of climate change and outstrip soybeans as a high demand, optimally sustainable crop worldwide. Developed and grown at the Badgersett Research Farm in Minnesota, where Rutter is the CEO, the hybrid plants recommended here are compact, densely yielding shrubs that require little cultivation, efficiently soak up water, and actually reverse soil erosion. Amazingly versatile, the hazelnut and its coproducts, including husks and shells, can be used not only for food but also for fuel and construction. Along with abundant photographs and useful charts, Rutter and his coauthors provide a wealth of information on growing-site requirements and management of a productive plantation, along with invaluable marketing tips. Their guide is a godsend for agricultural entrepreneurs and farmers desperate for newer, financially lucrative crops to replace those that have been, or may soon be, compromised by climate change."

"Anyone ready to innovate outside the box will be blown away by the vision and practical insights demonstrated in *Growing Hybrid Hazelnuts*. The eclectic blend of science and practical how-to information packed into this fascinating, readable book is enough to inspire a whole new generation of farmers. Turning soybean fields into hazelnut plantations is truly a vision for the stout-hearted pioneer futuristic farmer. Sign me up."--**Joel Salatin, farmer and author**

"A more resilient future requires diverse and hardy food-bearing crops. *Growing Hybrid Hazelnuts* is an encyclopedia of the 'how-to' and 'why-for' of breeding, growing, harvesting and marketing this unique and important crop. We just planted 300 hazelnuts last year!"--**Nathan John Hagens, Editor, TheOilDrum; President, Bottleneck Foundation**

"If you are dissatisfied with the current state of the annual based agriculture system currently dominated by corn and soy, then here is an alternative. This book is an action plan building off of Phil Rutter's thirty years of experience, where you can become part of the actual on-the-ground change towards building a perennial woody system that conserves resources while providing for human needs."--**Diego Footer, Founder of Permaculture Voices**

"This book is not only a testament to 40 years of dedicated hazel breeding work, but also a call for more tree crops for a sustainable agriculture in general; a fantastic manual about all aspects of cultivating hardy hazel trees and processing their nuts."--**Martin Crawford, author of *Creating a Forest Garden***

"The authors of *Growing Hybrid Hazelnuts* have been advocating woody-plant staple crops for carbon sequestration since I was in high school. This manual provides theory, context, budgets, and practical details like pest management and fertility for this important new crop. Worth the price for the information on their innovative hybrid swarm breeding system alone."--**Eric Toensmeier, author of *Paradise Lot* and coauthor of *Edible Forest Gardens***

"*Growing Hybrid Hazelnuts* is a compelling work combining natural history, genetics, and ecology to form a rich strategy for breeding hardy, disease-resistant, and productive hazelnuts. The need for perennial staple crops is great, and the authors show that it takes time, integrity, and patience to develop a crop that will feed the world. This book not only completely covers hybrid hazelnut cultivation, it also offers a roadmap for breeding other crops if we are to get serious about regenerative perennial food production."--**Steve Gabriel, coauthor of *Farming the Woods***

About the Author

Philip Rutter is the chief scientist, founder, and CEO of Badgersett Research Farm; founding president of The American Chestnut Foundation; and past president of the Northern Nut Growers Association. He is an evolutionary ecologist, with a Masters and "ABD" (All But Dissertation of PhD) in zoology, with a minor in animal behavior. At one point he escaped from academia, when he discovered it was not his cup of cappuccino. With a parasitologist PhD advisor, he is deeply trained in the evolution of diseases and symbiotic systems.

Dr. Susan Wiegrefe is Badgersett's research associate. She has a PhD in plant breeding and plant genetics and taught courses in plant propagation and nursery management for four years at the University of Wisconsin–River Falls. Co-incorporator and past president of the North American branch of The Maple Society, her latest personal endeavor is as the owner and operator of Prairie Plum Farm, where she raises Babydoll sheep, fruit, and nuts, and soon will include an aquaponic vegetable/tilapia system. In her spare time she hangs out with her two Havanese dogs, when she's not spinning or making cheese and beer.

Dr. Brandon Rutter-Daywater grew up on Badgersett Farm, eating some dirt but very few hazelnuts?they were all for seed! Dedicated to the long-term viability of the human race, and therefore our concomitant living things, his formal training is primarily in engineering and biologically inspired robotics. A national merit scholar upon graduating from high school, now he's the COO at

Badgersett, building a family and a house where he's convinced he'll be able to do the most good. He is now growing and eating a lot more hazelnuts!

Users Review

From reader reviews:

Jerry Carley:

Reading a book can be one of a lot of activity that everyone in the world loves. Do you like reading book and so. There are a lot of reasons why people love it. First reading a publication will give you a lot of new information. When you read a reserve you will get new information since book is one of a number of ways to share the information as well as their idea. Second, looking at a book will make an individual more imaginative. When you looking at a book especially tale fantasy book the author will bring that you imagine the story how the character types do it anything. Third, you are able to share your knowledge to other folks. When you read this *Growing Hybrid Hazelnuts: The New Resilient Crop for a Changing Climate*, you may tells your family, friends and soon about yours publication. Your knowledge can inspire different ones, make them reading a reserve.

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Penny Risley:

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