A vibrant agroforestry industry in the Connecticut River, Housatonic River, and Hudson River watersheds in western Massachusetts and eastern New York

Quick-growing perennials have ignited the agroforestry industry in the Northeast resulting in local ciders and chestnut flour pizza parties.

Characters:

- Russell, Breadtree Farms, Chestnut farmer (Columbia County, New York)
- Sarah, Chestnut flour grinding operation, Mill River Gristmill (Amherst, Massachusetts)
- Matt, Atkins Farm, apple farmer and wild apple forager (South Amherst, Massachusetts)
- Jonathan, Valley Cider, hard cider distiller (Hadley, Massachusetts)
- Celeste, Chef at Northampton Brewery (Northampton, Massachusetts)
- Maria, mother (Greenfield, Massachusetts)
- Serena, Pocomtuc descendant (Great Barrington, Massachusetts)
- Tiffany, Connecticut River fishing company (Leverett, New York)
- Lisa, former dairy farmer (Hudson, New York)

The 30th Annual Chestnut Brunch, Conway School of Design, Conway, Massachusetts

“Celeste, that pizza smells amazing,” Tiffany, the owner of a Connecticut River fishing company, interjected as she shifted the hot coals in the fire around her corn sheath wrapped bass, freshly caught on the river that morning. “My daughter, Luna, is going to be so jealous. She’s joining me this summer on the boat for her first season and caught these bass on the river just this morning. Did you know they teach your chestnut flour pizza crust recipe in Luna’s home economics class at Greenfield High School now?”

“I never thought I’d say this, but they planted too many chestnuts as windbreaks between the sports fields at the high school.” Russell, an old farmer who was one of the first farmers to plant
chestnuts on his Columbia County, New York property, chimed in. “Twenty years ago, when the chestnut rush first emerged, nobody knew what they were doing. It took us about a decade to get tree spacing right. Now, because of the Bioregional Child Food Education Investment Act, the school is selling chestnuts wholesale and investing back into the school farm.”

“Luna loves working at the school farm each afternoon. She started a little garden in our backyard so she can showcase some of the home economics recipes at dinner time. She’s too lazy to visit the farmer’s markets each weekend.” Tiffany chucked. “Fishing has her all tired out.”

“Things have come full circle in our region,” Jonathan chuckled, as he poured Celeste a tall glass of his latest batch of Valley-grown hard cider. “I never thought I’d be taking on UMass Food Science interns this year at the cidery or transforming my grandfather’s old tobacco barn into our second cider distillery in Hadley, Massachusetts. The loan we just got approved for from the Bioregional Food Distribution and Processing Investment Act has made this all possible.”

“I’m sure glad you are starting a second distillery location, Jonathan,” Sarah said, as she took a long sip of the cold cider. “This cider batch is absolutely delicious. So cold, and dry, and crisp! If you hadn’t figured out the financing to rebuild that old shack for the first distillery I would never have been bold enough to rebuild the historical Mill River Grist Mill to grind chestnut flour from Russell’s chestnut trees.”

“Do you remember how dirty the Mill River water used to be?” Celeste questioned. “I can’t believe we used to swim in that creek as kids! The park trees we planted have made a big difference in the water quality.” Celeste shook her head. “Sarah, how would I ever make these chestnut flour pizzas without you? My team at Northampton Brewery used to grind chestnuts by hand, right Russell?”

“It was a mess,” Russell grumbled.

Celeste laughed. “It was a disaster at first.”
“My new apprentice, Ben, has been such an amazing help this season processing all Russell’s chestnuts at the Grist Mill,” Sarah replied. “Now that the first hundred trees you planted are mature, Russell, you are keeping us so busy!”

“Happy to help,” Russel chimed in with a smirk. “It’s been our most productive chestnut season to date, and I bet Atkins Farms Market is excited to have such an abundance of chestnut flour on their shelves, Sarah! Did you know they’ve transitioned all their heirloom apple pie recipes to chestnut pie crusts?”

“That’s amazing! Those apple pies are so delicious,” Celeste replied. “I know we’ve won the ‘Valley’s Best’ award for our chestnut crust pizzas at Northampton Brewery in Northampton, Massachusetts for three years running, but it’s not MY recipe. Serena taught me the recipe years ago and gave me permission to share it. And all those amazing pizza toppings are grown locally by many of our farming friends, who deserve the real credit. We’re just lucky at Northampton Brewery that we get a tax credit for buying from local producers each year for participating in the Local Food Purchase Tax Credits program,” Celeste explained.

“And you buy produce from kids like Luna at the school farm!” Tiffany piped in with a smile.

Serena nodded in agreement with Tiffany. “That pizza crust is one of the last chestnut recipes I was taught by my Pocomtuc grandparents. It’s the perfect flour for baking. I was happy to give the bakery at Atkins Farm Market tips when they were first experimenting with chestnut flour recipes.”

“Your chestnut baking class last week was amazing, Serena.” Maria chimed in. “Chestnut flour has been transformative in our family. Did I tell you that my son Charlie’s doctors say he’s barely on the autism spectrum anymore? It took a decade of removing gluten from his diet. The guidance counselor at Greenfield High School thinks he may even be able to join his grade level next year!”
“That’s wonderful, Maria,” said Matt, a young apple farmer who took over the orchards at Atkins Farm Market in South Amherst, Massachusetts. “Have you tried my apple pie recipe with the hot weather apples that are finally maturing? It’s perfect for all that extra chestnut flour. And Marie, thank you for guiding our bakers! We are so lucky that we started to forage wild apples a decade ago and found this apple variety on the south side of Mt. Tom, left behind by homesteaders.”

“How is the new apple crop coming along, Matt?” Russell asked. “I wasn’t sure what to think when you tore out all those heritage apple varieties. It makes an old timer like me cringe to see trees lost.”

“Those old apples just don’t grow well anymore, Russell. It’s too warm in the region for those varieties,” Matt responded as he shook his head. “We’ve kept a few of each just in case. You know how old man Atkins feels about those heritage apples he spent a lifetime cultivating.”

Russell nodded. “But, you can’t beat the improvements the new apple varieties have had on the farm though, Matt. Production has increased every year. And, there is more habitat for pollinators, insects, birds and wildlife than ever before. The north facing apple orchards have been providing shade for cattle, sheep and chickens, whose manure is recycling nutrients into the farm fields. The apple trees have also decreased soil erosion, compaction, nutrient leaching, water runoff, and displaced the invasive species who grow in all this warm weather. It’s been such a wonderful investment for Atkins Farm Market!”

“We’ve partnered with Propagate Ventures, and their financing models have provided us the startup capital to invest in a new test row of cider apples each year on that north facing hill, where it’s cooler,” explained Matt. “This weather is pushing the limits of the orchards we established 15 years ago already, and we want to make sure we have sufficient supply for our new hard cider partnership with Valley Cider. We’re calling it ‘South Amherst cider.’ So, getting the trees established and having the right management strategy is critical.”

“We’ve also been planting peaches at our property in Rensselaer County with the help of Propagate Ventures,” Lisa chimed in. “I was so sad to let the dairy cows go, but our dairy wasn’t
competitive in the marketplace anymore. My family has managed these 100 acres of land for six generations already, and we had to figure out how to stay financially viable to save the farm. Our team couldn’t have made the transition without the loan forgiveness from the Dairy Economy Transition Investment Act that allowed us to invest in our peach orchards. We took classes and workshops funded by the Bioregional Diversified Adult Farm Education Investment Act every year for the first decade to figure out how best to establish the orchards and holistically manage our livestock operations. It’s challenging to get the correct balance between grazing pace and forage growth! But, we’ve got room for some apple trees on our north ridge that we just cleared of invasive species if you are interested in partnering, Jonathan and Matt.”

“Let’s figure out a time for me to come see the property next week,” Jonathan replied. “Hey, Russell,” Jonathan interjected, “What’s the price you are getting for your carbon credits from Regen Network for all those chestnut trees? We’ve been getting over $100 a pound of carbon for the apple trees we’re stewarding for our ciders. My brother thinks it’s time to plant another acre of apples, and maybe Lisa’s property would be a good solution.”

“Finally getting real value for the ecosystem services of our agroforestry plantings is a blessing.” Russell responded. “It has allowed us to plant about 50% more trees each season as we expand the windbreaks around our annual crops. The extra cash flow per acre has made all the difference in this region. If you haven’t signed your properties up on the Regen Registry platform, Jonathan and Lisa, it is really time to take advantage of that opportunity. It may pay for your fruit tree expansions even in the first year!”

“If we can just keep planting those chestnut and fruit trees, Russell, we’ll be alright,” Tiffany said. “The fishing season on the Connecticut River has finally become predictable, which is great for our fishing business. We even got a loan for a second fishing boat this season, as we’ve been so busy supplying local restaurants with fish the past two summers. Restaurants from New York City have even placed some orders recently!”

“It’s been great for planning our menus at Northampton Brewery, Tiffany,” Celeste agreed. “Lisa, do you think you’ll expand into other perennials, like pecans, walnuts, chestnuts, oaks, hickories,
pears, peaches, plums, apricots, nectarine, hazelnuts, pecans, walnuts, persimmon, paw paw, blackberries, raspberries, blueberries, cranberries, currants, elderberries, gooseberries, hardy kiwi, and strawberries? I’d love to have a new source for these crops!”

“We’d love to plant more berries at our farm,” replied Lisa. “I guess we’ll have to lease more land to new farmers graduating from the local incubator programs funded by the Agriculture Land Restoration Act. We’ve been chatting about that as a strategy to activate another 15 acres that have been resting since we sold the dairy cows. The first two farmers we are renting acreage to have been extremely successful. Would you be interested in buying those crops, Celeste? It would be easier to entice farmers to commit to planting these crops if we can arrange purchasing agreements ahead of time.”

“Absolutely,” Celeste replied, as she smiled. “We’re always happy to invest in consistent quality and supply of berries. Our fruit cobblers rely on local, seasonal berries and chestnut flour from the Mill River Grist Mill that Sarah grinds. And our dinner plates rely on those amazing fresh bass you catch locally, Tiffany!”

Tiffany smiled.

“It’s made all the difference now that you are letting all of us farmers use the warehouse at Northhampton Brewery, Celeste. Renting cooled storage space for our chestnuts for just a few hours until Sarah’s apprentice, Ben, drops off fresh chestnut flour to your team and picks up our nuts has saved my team so much time and money on transportation,” Russell chimed in. “We were driving almost two hours each way twice a week before! Renting space by the hour, half way between the Grist Mill in Amherst and our chestnut farm in New York has really simplified things.”

“Russell, do you remember when we first met?” Tiffany chimed in.

“It’s hard to forget. You smelled awful delivering those fish to Celeste at the Northampton Brewery,” Russell piped in with a smirk. “That is when you realized our team was using the
BRASA (Bioregional Agroforestry Suitability Analysis) agroforestry planting data to establish new riparian buffers along the river. With the water quality and temperature tests you had been taking daily, Tiffany, we could finally see the link between the water filtration and shade provided by the tall trees. You were able to find the cool spots in the shade of our tree plantings where the bass were hiding."

“It was a relief to figure that out,” Tiffany agreed. “After that, I told everyone to plant trees to help our fishing company to stay in business. It’s amazing how the riparian trees slowed water run-off, trapped sediment, and prevented the channelization of streams through their foliage and below ground roots. Pocumtuc means ‘clean river,’ after all, right Serena?”

Serena smiled. “Indeed, it does.”

“It’s time to eat,” declared Jonathan. “It smells too good to wait!”

“Should we make a toast?” asked Serena, as she raised her glass of Valley-grown hard cider.

“To chestnuts?” offered Matt, as he poured another glass of cider.

“To apples?” Maria quipped.

“To our community, strengthened by agroforestry and our relationships,” Russell agreed.

Russell, Sarah, Matt, Jonathan, Celeste, Maria, Serena, Tiffany, and Lisa clinked their glasses of Jonathan’s latest hard cider batch together. They dug their forks into the steaming hot bass Tiffany had caught on the Connecticut River that morning. Their fingers became greasy from the slices of chestnut flour pizza, smothered in fresh vegetables grown by farming friends and Tiffany’s daughter, Luna, and baked with chestnuts that were harvested from Russell’s pastures. They eyed Matt’s dessert, apple pie made of the newly maturing climate-adaptive apples and a chestnut flour crust that was ground in Sarah’s local gristmill. The late summer moon rose, shining down on the river valley, and their community, strengthened by agroforestry and their relationships with each other.