

## *The best way to raise cows sustainably? Set them free*

*An old farming technique called silvopasture, which allows cows to graze on a variety of plants in forests and tree-filled pastureland, is seeing a resurgence across the world.*



A newborn calf runs after farmer Brett Chedzoy tags it and gives the calf a selenium shot. Photograph: Heather Ainsworth

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*H Conley in Watkins Glen, New York, Sun 18 Jun 2023 06.00 EDT Last modified on Wed 21 Jun 2023 09.36 EDT*

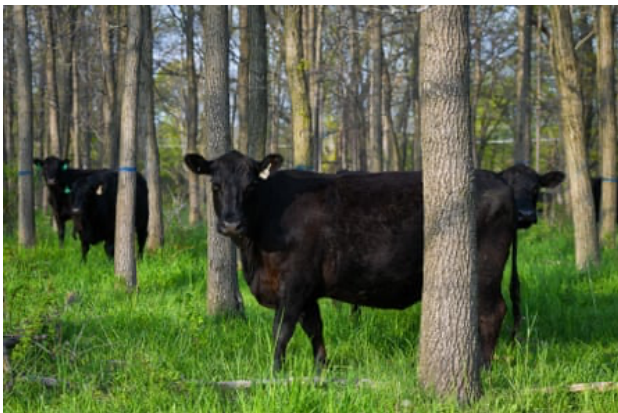
Brett Chedzoy and his wife, Maria, live on a 300-acre farm in Watkins Glen, a small town along the Finger Lakes in [New York](#), with 100 cows – primarily Black Angus, with a few White Galloways scattered throughout the herd.

The farm, Angus Glen, has lush green pastures and wooded areas, where black walnut and black locust trees stretch skyward out of rolling seas of tall grasses, shrubs and clovers. When Chedzoy, 54, walks through the pasture at sunset, the cows pop their heads up, follow him and wait patiently at the gate. As he pulls it aside, the cows rush forward into the wooded area to nibble on tree

branches and shrubs, before turning their attention to the emerald grass around the trees.

Here, the cows don't only live on pastures, as you'd expect – they also live in the woods.

“When you move into a fresh paddock, it's fun to watch them for the first five minutes because they'll walk over and they'll take a little bit of this and a little bit of that,” said Chedzoy, also an agroforestry educator at the Cornell Cooperative Extension. “They instantly know that's good for me, that's not good for me – they're self-medicating.”



*Aberdeen Angus cattle graze at Angus Glen Farms, in Watkins Glen, upstate New York. Photograph: Heather Ainsworth*

It's an old farming technique called silvopasture, in which cattle graze on a variety of plants, either in forests that have been thinned and planted with grasses and shrubs, or pastureland that's been planted with widely spaced trees.

Considered better for the environment and less emissions-intensive than most other forms of cattle production, silvopasture is seeing a resurgence around the world with major efforts to expand its usage in Canada, Brazil and [the Mediterranean](#). And now, in part through Chedzoy's work, in the US as well.

Chedzoy first learned about silvopasture while serving in the Peace Corps in Argentina in the early 1990s. Beef is a staple of the diet there, but

cattle are also used to provide key fire-prevention services by grazing away potential fuel in forests.

“That opened my mind,” said Chedzoy.

When he moved back to New York, on to poor-quality farmland that his father had bought years before, he and Maria wanted to use the land. Not satisfied with the quality or price of grocery store beef, they started with just two cows and their calves in 2003. As the herd grew, he ran out of space in the old dairy barn he'd been using to hold them in winter. The solution was raising them on silvopasture instead.

Rather than building another barn, he started using forests as a natural shelter to keep his cows protected from the wind and snow in winter, and the heat of sunshine the summer. In addition to saving him money, doing so has been [found](#) to help cattle reach their target body weight quicker than those in direct sun, since they need to spend less energy on regulating their body temperature.



*Chedzoy comforts a newborn calf at his farm in Watkins Glen. Photograph: Heather Ainsworth*

There are many other benefits to silvopasture for cattle, farmers and ecosystems.

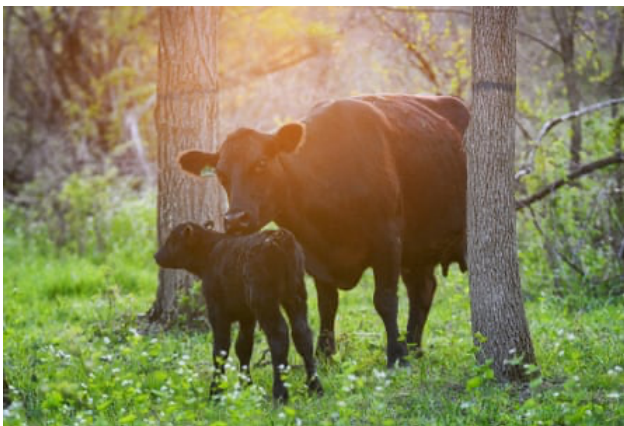
Silvopasture gives cows choice in where to be and what to eat, which Karolini Tenffen de Sousa, a postdoctoral fellow at Instituto de Zootecnia in Brazil who specializes in cattle behavior, says can improve their health. Cows

can be in the shade when they want, drink water when they want, and graze when they want. “If they don’t experience stress their physiology will be good,” she said.

According to a 2017 study from the Center for Agroforestry at the University of Missouri, silvopasture can also extend the grazing season, so that it starts earlier in spring and lasts longer in fall compared to open pasture. Forage also grows better in silvopastures during the hottest times of the summer compared to open pasture, the study found.

“The silvopastures are gold during droughts,” Chedzoy said. “The plants don’t wither and burn up like they do in the shadeless pastures.”

Chedzoy says the cows’ diet of grass, forage and hay that he harvests in the summer means he doesn’t need to supplement his feed with protein meal or additional roughage the way many farmers do. And having the cows spread out across the forest all year long – instead of being stuck in a barn during the winter – means their waste doesn’t pollute the local watershed.



*Silvopasture can also extend the grazing season, so that it starts earlier in spring and lasts longer in fall compared to open pasture. Photograph: Heather Ainsworth*

And silvopasture allows for many layers of biodiversity compared to grasslands. They support a wider variety of bird species, more

pollinators, bigger and more diverse mammals, and a much wider variety of plant life with more varied root systems.

But it also requires careful management and daily rotation, as livestock can damage trees by trampling roots. This wear and tear can go unnoticed for years, and once the damage is visible, it can be too late to save those valuable trees.

While research is still in early stages, [Project Drawdown](#), a leading organization promoting climate solutions, has heralded silvopasture as an agricultural solution to the climate crisis due to hopes it can increase carbon sequestration through plants pulling [carbon from the atmosphere through photosynthesis](#), sinking it into soils, and holding it in their own biomass.

Alix Contosta, a research assistant professor at University of New Hampshire who focuses on the relationship between land use and climate, says that her research has shown that carbon and nitrous oxide emissions were lower in silvopastures compared to areas that were clear cut or in treeless pasture, meaning cattle on silvopasture has lower emissions. In addition, most silvopastures, like Chedzoy’s, don’t require emissions-intensive fertilizers or feed that has to be grown and shipped to the farm, further reducing the impact on the climate.



*Brett Chedzoy: ‘We can grow more of what we*



*need in our own backyards.’ Photograph:  
Heather Ainsworth*

But farmers often need support in getting silvopastures off the ground. Some experts point out that while there is federal funding available to help farmers start silvopastures, it’s often difficult to access because of bureaucratic red tape and the time-consuming application process.

Still, the technique is gaining popularity. Chedzoy has been encouraged by the increasing popularity of his courses and trainings and by young farmers following in his footsteps who are committed to regenerating their land with agroforestry.

Katherine Carestio considers him a mentor. She’s a young farmer who first encountered silvopasture at Angus Glen. She now runs Backbone Farm in Trumansburg, New York. Along with her husband Jamie, she owns a small herd of Red Devons mixed with Chedzoy’s Black Angus. She said Chedzoy helped them set up their farm and silvopasture, guiding them through questions about infrastructure and management and lending them a bull before they got their own.

In the last two decades, Chedzoy has watched silvopasture go from something nearly unheard of in the region, to a much discussed climate solution. He sees a future with hundreds of thousands of acres of silvopasture in New York. “We can grow more of what we need in our own backyards,” he said. “And do it in a way that’s a win-win for the environment and the animals and the farms and even the whole community.”