



The Secret Is in the Soil

How Funga Is Changing Forest Health

By Jeanne Harmor, Director of Communications, NCFA

Since its founding in October 2021, the team at Funga has been united by the goal of sequestering 3 billion tons of carbon dioxide by 2050 through biodiversity restoration. By reintroducing native growth-promoting fungal communities to forest soils, they are supercharging one of the biggest carbon-storing mechanisms on the planet: forests.


So, how does it work?

We sat down with Funga's Landowner Enrollment Specialist, Andrew Stewart, to learn how the team is accomplishing its mission, one tract at a time.

Andrew Stewart has spent his entire career on the reforestation side of forestry. He studied forest

management at Haywood Community College and NC State University and, after graduating, began working immediately at Weyerhaeuser, eventually transitioning from production management into sales. From there, he became a genetic investment advisor at IFCO (now PRT-IFCO), gaining experience in sales, seedlings, and genetics.

A company called Funga began collaborating with PRT-IFCO to increase the survival and product gain for its seedling customers. Stewart became intrigued and wanted to learn more. A career opportunity presented itself with Funga, and Stewart's background in sales and genetics made him a perfect fit. He made the change and has served as their landowner enrollment specialist since March of 2025.



Seedlings inoculated with mycorrhizal fungi are ready to be planted to increase below- and above-ground diversity for landowners.

The New Kid on the Block

Though it's been in business for less than five years, Funga is a company that has hit the ground running, trailblazing the Southeastern forestry scene since its inception.

Funga primarily works with forest landowners, both private and those within Real Estate Investment Trusts (REITs) and Timber Investment Management Organizations (TIMOs), as well as some who oversee government land. The company utilizes a carbon program to address the everyday challenges of restoring biodiversity to a landowner's soil. Research has shown that reintroducing native mycorrhizal fungi at inoculation is a cost-effective and environmentally beneficial method to boost growth, similar to using fertilizer.

Funga offers **optionality** and **additionality** in the Southeast, bringing new income pathways and volume gains by way of carbon programs. The carbon market is evolving in the U.S., as more regions have introduced initiatives to become greener. One way they are working toward this is by purchasing carbon credits from projects that reduce or capture emissions, such as reforestation, to compensate for their own unavoidable emissions. Funga has found success by selling carbon credits that are produced by the additionality that occurs when natural fungi are used to reforest an area. Larger trees capture more carbon, making healthy soil key to forest resilience.

"The cost of fertilizing is a common barrier for small landowners, and we are noticing that, because of this, many people are skipping this crucial step as they are planting their rotations," said Stewart. "The science of soils has interested me since college. Trees don't get the nutrients they need to thrive if fungi aren't attached to their roots — that's why introducing fungi at planting time is key."

Optionality means that landowners have carbon options that are available to them, but they are not required to use them.

Additionality means that the activities implemented to sequester or reduce carbon emissions should result in additional carbon benefits beyond what would have occurred if the trees were grown with regular fertilizer, or none at all.



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 PRT-IFCO's seedlings are inoculated with Funga's naturally occurring mycorrhizal fungi.

How it Works

Funga inoculates nursery containers so that fungi aren't lost during transfer. If a landowner decides to utilize Funga's services, it is important that services are engaged prior to the start of planting. Once enrolled, the inoculation is free to the landowner, who will also receive annual carbon payments. Additionally, most landowners also qualify for additional incentives to enhance their seedling order for that year. The landowner is only responsible for buying the seedlings, which must be purchased from PRT-IFCO as part of Funga's exclusive partnership agreement. These seedlings are specifically inoculated with the naturally occurring mycorrhizal fungi.

Once the seedlings are planted, Funga personnel return to capture data after the first three years, then about every five years after that, measuring the heights and diameters of the trees that have been planted. The company is targeting a 30% increase in biomass among inoculated plots (compared to untreated control plots). After three years of capturing data, they have reported a substantial increase in tree volume for trees utilizing

the naturally occurring fungi vs. those that have not. As the teams measure the height and stump differences after years of growth, they refer to the volume gains as additionality, which also references the amount of carbon captured.

"As far as the landowner is concerned, it's a set-it-and-forget-it scenario," said Stewart. "Once they are in the program, landowners can continue managing their land as they always planned. Our team will come back every five years to capture data, and then we share that data with the landowner to show their additional tree growth per acreage."

If a landowner decides to sell their land before the contract expires, he or she can decide if they'd like to include the existing carbon payments in the sale, or they can opt out of the contract. Funga's team would help the landowner navigate their options in this scenario.

Where the Rubber Meets the Road

Since its inception, Funga has increased its number of committed acres year after year. Currently, Funga operates across the Southeast, extending westward to parts of Oklahoma. The company has enrolled 28,000+ acres to date and continues to scale. For landowners, it's important to understand that, just like the growing of trees, this is a long game. In the first few years, they will start to see the difference in the height of their trees, as well as their bark diameters. If landowners don't see measurable additionality within the contract period, they may opt out. So far, no one has opted out.

"It's exciting for me to have joined a company in its infancy stages. I am enjoying watching our growth and offering options for landowners to get more for their planting efforts, while making some extra money in the process," said Stewart. "If I can help a landowner make a little extra money to pay their taxes, or to make life easier in general, that is what makes it worth it for me."

Looking Ahead

For now, growing the company is at the top of the list as Funga looks to the future. The company is actively evaluating opportunities to expand into partnerships with growers and testing other species besides southern yellow pine. Currently, the team is conducting tests in the Pacific Northwest so that the program can eventually include hardwoods and additional softwood species. Once the company is ready to branch out, it will modify its existing program to accommodate varying growth rates among species. As for Stewart, his journey at Funga is just getting started.

"The Southeastern forestry world is filled with some of the best people, and they've become family to me," said Stewart. "Every day, I get to bring a new lease of life to the reforestation programs I've supported for a decade. What could be better than that?" ■

TO LEARN MORE ABOUT FUNGA,
scan the code or contact Andrew Stewart
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