



September 2025

By: Kathleen Preece

Animal Farm: Where They Rule the Roost

When Harry Groot told Team Dovetail: “My schedule depends on the needs of the animals,” we suspected Harry Groot was more than ‘just about’ biochar. Let me explain. Harry is an 11-year veteran of Dovetail Partners. If you are reading this article, you are familiar with Harry’s professional work with Dovetail, most recently and specifically working with ‘biochar.’ That subject has earned Harry a supportive audience and following, both within and outside of the Dovetail team.

If you are not familiar with biochar, it is defined in the “Minnesota Landowner Guide to Biochar,” as a “contemporary technology that returns carbon to the soil in the form of long-lasting charcoal.” Harry will argue this definition, noting that the practice is millennia old and was ‘rediscovered’ in just the last century to inspire its current use, as well as motivate development of an industry sector.

What is not arguable is that biochar is made by baking biomass (such as tree wood, plants, manure, and other organic materials) without the oxygen that could cause it to burn completely to ash. This charcoal, produced from plant matter and stored in the soil, is a means of sequestering carbon dioxide from the atmosphere instead of having it released into the atmosphere. As Harry points out, it’s very much an offsetting technology since the biomass processed into biochar would otherwise decompose and release all its carbon.

Harry has devoted time, energy, and a scientific passion to understanding it. That interest was borne out of a small forest products business he operated, including low impact logging and a portable sawmill from which he made custom wood products. Additionally, he did some consulting work and found himself working with a colleague in New Mexico who had found a market for woody biomass resulting from forest restoration and wildfire reduction work of the US Forest Service. Harry and his colleague looked at wood pellets as one of the product options. Harry realized it was easy to produce biochar from pellets and chips. The biochar turned out to be an alternative to the low market value of pellets and Harry’s colleague continued expanding that market. Harry, himself, still had an interest in biochar. He obtained a grant to produce it and now continues supporting and engaging in numerous studies related to the material.

But, what about those animals his schedule revolves around? Admittedly, after his comment about his calendar being dependent on the ‘needs of the animals,’ one’s imagination is charged with visions of biochar supernaturally coming-to-life.




Harry and Gail cradle their canine family members, Fern (collie) & Tallis (Dachshund)

View some of Harry’s Works Here!

[Comparison of Biochar Characteristics from Different Production Scales](#)

[Assessing the influence of biochar preparation methods on soil health in diverse managed ecosystems](#)

[Biochar's Impact on Soil Health - StoryMap](#)



Understanding a bit of Harry's family history helps. Born in California, Harry's dad was in the Air Force, and the family moved around a lot. The differing landscapes he found himself surrounded by, inspired Harry. He earned a degree in engineering at Virginia Tech and subsequently served on international projects as Virginia's Governor-appointed Representative to the Consortium for Manufacturing Competitiveness. He provided technology transfer assistance between higher educational institutions, federal labs, and regional businesses while regional director for the nonprofit Center for Innovative Technology. Throughout the years, Harry has provided consulting services to over 650 businesses, managed over \$5.8M in grants, was a founding member of and served as CEO of a forest products cooperative, and still manages a forest products company, which includes the small-scale production of biochar.

But then there's the heartbeat. It emanates from a "little 110-acre farm settled in the Blue Ridge Mountains of Virginia - a heartbeat inspired and energized by the 'animals.' Harry admits he had a longtime vision to be as self-sustaining as possible, given limited land ownership. He bought the farm in 1983; 90 acres are in forest, and the balance is in pasture.

Harry dedicated himself to advocating strengthening the rural economy and preserving working family farms through the practice of long-term forest stewardship and the guardianship of conservation breeds, specifically with poultry, sheep and dogs.

A "conservation breed" refers to a specific type of animal breed that is being actively conserved because of its endangered status or unique characteristics that are considered valuable for the long-term health and resilience of agricultural or ecological systems. These are breeds typically threatened by habitat loss, disease, or competition from more common breeds. Conservation breeds are rare or endangered and require active management to prevent extinction.



Gail and Harry Groot

Harry is not alone in this adventure. His wife, Gail, according to Harry, "is equal partner and equally crazy" about their commitments to the farm.

Harry and Gail have raised conservation breed poultry, goats, and sheep. He admired the small ruminants; they cleaned out the brush with their grazing and made it possible to have milk and cheese products. "And with the goats, of course, I had to have chickens." The couple started out raising the conservation breed poultry and goats and did so for 30 years before switching to sheep. The current Romeldale sheep species they raise were once used exclusively by the Pendelton Wool Company for their renown wool. Over the years, Harry says he acquired the skills and knowledge to be very self-sufficient. They have had dairy and meat goats (for about 40 years) and are going on 14 years with the sheep. They have also raised alpacas for fiber and raised Heritage breed turkeys for decades.

And then there are the Karakachan dogs! These livestock guardian dogs from Bulgaria live with Harry's and Gail's sheep and goats. The dogs are large, powerful, and known for their intelligence, loyalty, and protective instincts, making them exceptional defenders of livestock, property, and families. Harry is quick to share that the dogs are very bonded to, and defensive of their charges. And sometimes that includes humans. "As breeders, we are careful to discourage using them for anything, but livestock use."

They have five of them that, according to Harry: “are born, live, and die in the barn while tending the livestock.” Harry and Gail are deeply committed to the Karakachans and are part of a group of breeders who imported the first breeding pairs of the breed. The American Karakachan Dog Association was established to keep this unique breed pure and growing. “Everything here is pure,” Harry admits.

Daughter, Sarah, lives on the farm. She is a veterinary pathologist and has a lavender operation on the farm making soaps and lotions out of the thousands of plants she tends. Daughter, Emily, has a law degree with an undergraduate degree in Civil (Environmental) Engineering; she works in energy and administrative law in northern Virginia. One of Harry’s and Gail’s greatest joys is ‘grounding’ their four grandchildren in doing ‘real world things’ during the grandchildren’s frequent visits to the farm. There are fences to repair, yards to keep cleaned, animals to check on and feed, as well as “too big of a garden.” Aligned with all of that, there are orchards and blueberries to care for and harvest, the making of yarn and fiber products and then “packing it all up” for the weekly farmer’s market.

Team Dovetail looks to Harry Groot for the rhythm of biochar; but we understand that his heartbeat emanates from that Blue Ridge Mountain farm.



Spring's surprise: Triplets!

View Harry’s Other Works on the Dovetail Website by Clicking the Link Below

<https://dovetailinc.org/portfolio.phpSearch=Harry+Groot&submit=Submit>

Special thanks to Harry Groot for his notes and conversations that made this piece possible.