

GETTING HIS HANDS DIRTY

Retired radiation oncologist Peter Swift, MD '77, is committed to improving sustainable farm practices, literally from the ground up.

BY RENÉE GEARHART LEVY

It's January with nearly a foot of snow on the ground in Vermont but Peter Swift, MD '77, is focused on spring and summer. This morning, he spent several hours with his livestock team discussing the genetics of his herd of Belted Galloway cattle, the new bull on the way, and the timing of when pregnant cows might begin calving.

Also under discussion was this year's rotational grazing plan and placement of water lines to support the hay season. There are also greenhouses to prep and seed selection and timing of plant starts for the summer vegetable gardens to solidify. Dr. Swift is also in the midst of hiring his crew of summer farmhands.

While many of his peers have retired to warm climates and golf courses, Swift, a retired radiation oncologist, has found new purpose through regenerative agriculture—a holistic approach to improving soil health and restoring degraded ecosystems without chemicals while providing sustainability for the land and for farmers. For the last 13 years, he and his wife, Diana McCargo, have committed themselves to studying best practices and testing them out at their 500-acre Philo Ridge Farm in Charlotte, Vermont.

The goal is to regenerate not only the ecosystem of their own land, but to share what they learn to help farmers throughout the state and beyond with a goal of impacting the environment, food quality, and ultimately, human health.

Peter Swift and Diana McCargo with dogs Figaro and Blueberry on the farm. Opposite: Dr. Swift with a member of his Belted Galloway herd. The breed was chosen in part because their long hair is well suited to Vermont winters.



JESSICA SPIE



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“We’re basically trying to go back to agriculture from a hundred years ago where they didn’t use a lot of sprays and the fertilizer came from natural cycles,” says Swift. “I believe the process of improving the soil and the phytonutrients of the grasses that feed the livestock are going to result in a better diet. It’s not a magic bullet—we’re not necessarily going to stop somebody from getting breast cancer—but on a large scale over time, eating high-quality food rather than factory farmed and over-processed food will result in healthier people and less obesity.”

After a career treating individual patients, the farm has given Swift the potential to impact human health on a large scale. “I wouldn’t recommend this for everybody, but it has been great for me,” he says. “The skills I developed in medicine—identifying problems and making decisions with incomplete information—have transferred pretty well. It probably also helped that I was flexible in going from being the authority to the one who knew the least in the room.”

As a radiation oncologist for three decades, Swift treated adult and pediatric patients with a variety of cancers, including breast, lung, pancreatic, prostate and skin cancer. Over time, he became a specialist in radiation implants to treat prostate cancer.

“I was drawn to the field because I felt I could offer compassionate care to the dying,” he says. “I liked dealing with patients who were sick and needed help, including a lot of education and guidance, both technically and emotionally.”

While a medical student, his maternal grandfather was dying of prostate cancer. “He was at a top medical center supposedly receiving really good care, but in my mind, the care was terrible,” says Swift. “They weren’t controlling his pain. They were withholding information from him and not explaining things to the family. I thought it was atrocious and felt like I could make some improvements.”

Raised in Los Angeles, Swift attended the University of Colorado and came to Upstate Medical University at

the urging of relatives in Syracuse, his father’s hometown. Swift’s uncle, Edward Swift, MD 3’43, was chief of surgery at Crouse hospital, and his aunt, Miriam Swift, MD 3’43, practiced pediatrics in Syracuse. His grandfather, Albert Swift, MD (1902) had been a graduate and faculty member of the College of Medicine; the Department of Surgery Library is named in his honor.

JESSICA SIRE



As a fourth-year student, Swift worked with an intern who planned to pursue radiation oncology. “There wasn’t much swaying medical students in that direction at the time, but he sparked my interest,” he says. “I was fascinated by the physics and the use of technology to provide patient care.”

An intern year at the University of New Mexico convinced Swift he did not want to be an internist and solidified interest in either radiology or radiation oncology. He applied and was accepted to residency programs in both, ultimately choosing to train in radiation oncology at the University of Washington in Seattle.

After training, he moved to Anchorage, Alaska, to work with a friend and mentor from his time in New Mexico who now worked as a medical oncologist there. After a few years, the location proved too far away for his wife, and the couple set their sights on the Northeast.

They landed in Burlington, Vermont. That was 1984.

JESSICA SIRE



Good soil requires proper mineral, microbial, and structural properties to grow things well. By stewarding the land with rotational grazing instead of conventional, equipment-reliant practices, Philo Ridge Farm uses animals to enrich the soil's organic matter and nutrient content, which subsequently improves the vitality, resilience, and biodiversity of the landscape. According to Swift, animals raised eating grazing crops from such soil result in healthier, better-tasting meat.



For the next 26 years, Swift worked in a private group practice located within the University of Vermont Medical Center. Although the practice was independent, it used hospital-owned equipment and the doctors held faculty appointments along with teaching and research responsibilities. He also spent 12 years as the co-director of Lake Champlain Hospice.

As Swift was approaching 60 and his youngest son was graduating from college, the hospital began implementing major changes that would impact the autonomy of Swift's practice group. The time for a transition seemed natural and Swift chose to retire in 2010. He had no inkling what was to come.

He and McCargo had long lived in Charlotte, a small town about 10 miles south of Burlington on Lake Champlain, where the neighboring property was a 150-year-old dairy farm.

For some time, Swift had seen that the farm was struggling. "The fields were less productive," he says.

In 2012, the farmer put the property up for auction. When Swift and his wife caught wind that real estate developers were interested in the property, they decided to jump in and take it off the market to protect it.

"We recognized the beauty of the farm and wanted to protect the landscape," he recalls. "We thought we'd figure out what to do with it after."

Initially, they thought they might section off the land and lease it to other farmers. "We tried that, but the fields were so depleted that nothing much would grow," he says.

"Someone suggested we raise cattle, and I was like, 'I don't know anything about cattle,'" he recalls.

In truth, both he and McCargo were out of their depth. While she had a 35-year history as a home organic gardener, neither of them knew anything about large-scale farming practices.

So, they set out to learn.

Philo Ridge Farm sits on land with a long agricultural legacy. The Williams family established the first farm on the land in 1840, which was purchased by the Foote family in 1878, who founded and operated a dairy farm for the next five generations. By the 2000s, a steady decline in milk consumption, falling dairy prices, and a consolidating industry, made the operation untenable. In 2012, the sixth generation of Foote farmers made the difficult decision to sell the farm.

One of the first challenges Swift and McCargo faced as new owners was the poor quality of the farm's soil. Prior to their ownership, most of the fields were used for conventional corn and hay production, which required annual plowing. This conventional plowing practice compacted the soil, resulting in reduced organic matter and fertility. "There was not a lot of nutrition left and the water flow was impaired," Swift says.

He began educating himself on regenerative farming practices and found great resources by partnering with scientists at the University of Vermont and hiring agricultural consultants who provided guidance on returning the soil to a productive medium.

The goal is to put more nutrients into the soil than are taken out. One of the first tenets is avoiding conventional plowing, instead using a no-till seed drill which helps maintain the natural structure of the soil.

The next is to grow grasses that serve as feed for livestock and to use rotational grazing instead of standard, equipment-reliant practices. Rather than chemical fertilizer, animals are used to enrich the soil's organic matter and nutrient content, which subsequently improves the vitality, resilience, and biodiversity of the landscape.

"The key to this system is careful timing of rotations," says Swift. "Our team moves temporary fences every day to ensure the livestock always get the best grazing available and the plants have time to fully regrow."



At the same time, Swift and McCargo began restoring the buildings on the property, beginning with an old brick house from the 1800s and turning an adjacent barn into a farm office. Soon after, two young farmers approached them about leasing some pastures and barn space for their sheep and poultry business.

As the soil improved, so did the extent of operations. In 2016, Swift hired a livestock manager and introduced heritage breeds of cows, pigs, sheep, and chickens to the mix.

Infrastructure improvements continued by building the Farm Commons Barn, which houses the farm's

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kitchen, dining areas, and market. That project included relocating an 1850 post-and-beam barn into the new building to serve as the heart of the operation. More barns followed to create space for their growing livestock and garden operations.

As Swift and McCargo saw that the livestock, soils, and pastures were thriving, they began expanding their vision and assembled a team to help them grow the venture. A garden manager helped McCargo establish two acres of certified-organic vegetable and fruit gardens, augmented by two greenhouses that allow for year-round production. A market store sold everything grown and raised at Philo Ridge Farm, and also became a gathering place for coffee drinks, baked goods, fresh salads, sandwiches, and soups. Farm-to-table dining facilities quickly earned a reputation as a destination-

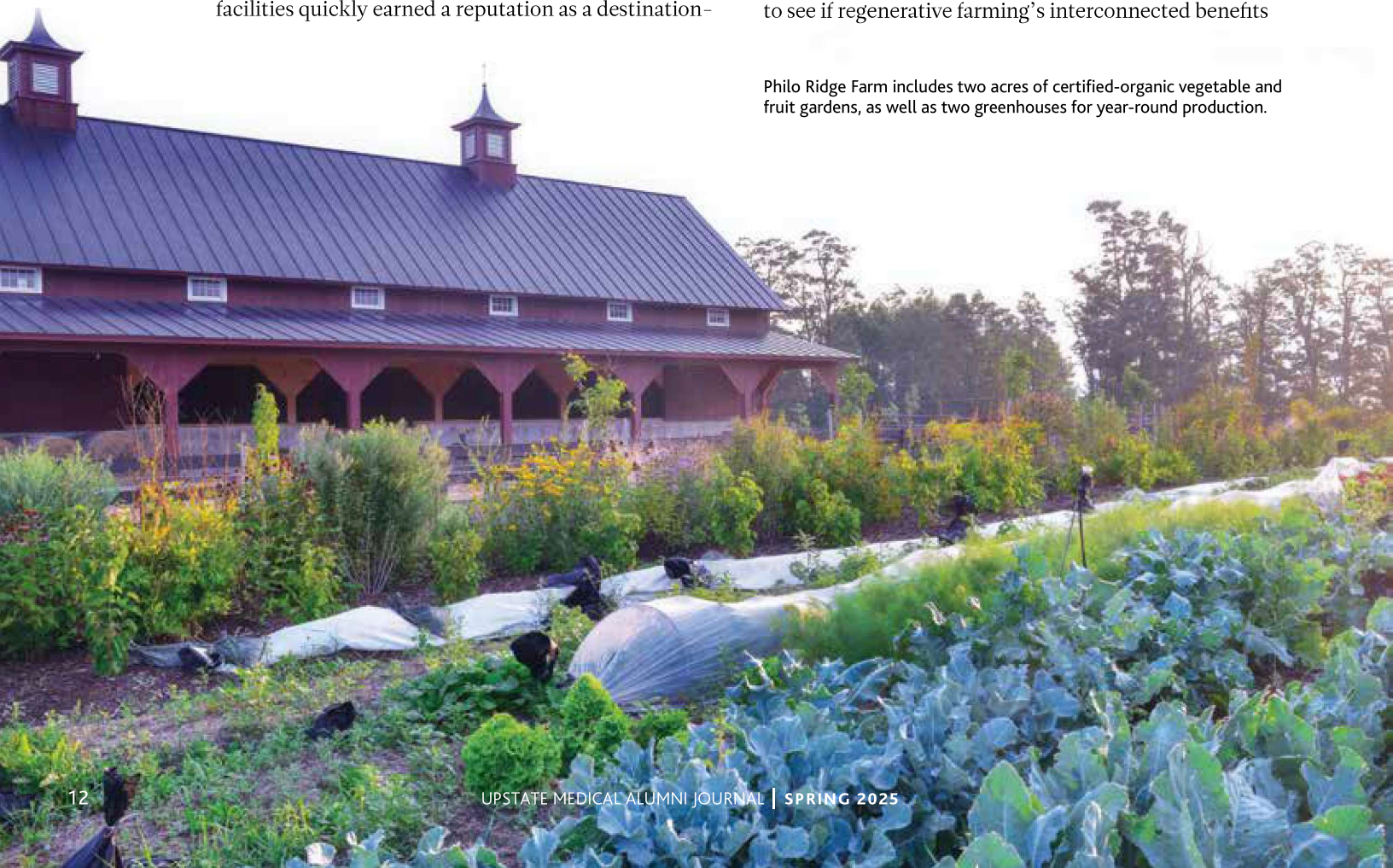
worthy dining experience. In 2020, an on-site USDA-inspected slaughter facility began processing between 2,500 and 4,000 chickens a year.

Despite its growth and expansion of operations, land stewardship has always been the focus. Swift and his pasture crew have worked closely with the University of Vermont for years to establish a research and evaluation protocol that can be used by other farms around the state.

About 80 percent of Vermont's farmland is dedicated to commodity dairy and conventional hay and crop production. Swift's goal has been to use what he's learned to help others employ more sustainable farming practices, and in the process improve the quality of the food supply and help the environment.

Regenerative agriculture is still being defined as a practice, and its environmental, economic, and social impacts have yet to be well studied and documented. "There's scant data on the costs and return on investment of transitioning from conventional farming practices to regenerative methods," says Swift. "Data collection and analysis around all of these factors is crucial to understanding and communicating the potential benefits of regenerative farming methods for Vermont's farms and farmers, and the communities they support. We are aiming to collect data through research to see if regenerative farming's interconnected benefits

Philo Ridge Farm includes two acres of certified-organic vegetable and fruit gardens, as well as two greenhouses for year-round production.



can ultimately lead to greater economic stability and success for farmers, as well as more resilient local food systems.”

Swift says his background as a physician has aided the research process. “My experience with experimentation, interpreting results, and statistics enables me to understand what people are trying to do with these studies and to determine what is significant and what’s not worth the effort,” he says.

In 2020, Philo Ridge Farm and its research partners were awarded a \$2 million, five-year Conservation Innovation Grant (CIG) from the U.S. Department of Agriculture to assist 20 farms throughout Vermont in the implementation of regenerative management practices that have been tested at Philo Ridge since 2015. The project aims to assess the ecological, economic, and social impacts of adopting a soil management system that includes planting cover crops, reducing tillage, modifying nutrient management, and the intensive, rotational grazing of livestock.

The ultimate aim of the CIG study is to provide a comprehensive, data-backed understanding of the effects of regenerative farming practices on Vermont’s farmland and environment, the effort and expense that go into implementing these methods, and the overall economic and social benefits to farms, farmers, and communities of adopting regenerative practices.

“We are exploring a potential approach to agriculture in Northern New England that could provide a viable income to farmers while improving soil health, sequestering carbon, and raising nutritious food. The work has the potential to provide a win-win for farmer livelihoods and the climate problem,” says Eric Bishop von Wettberg, University of Vermont’s ecological team lead.

In addition to its lead role in the CIG study, Philo Ridge Farm has also hosted studies testing cover crop varieties for things like phosphorus uptake, nitrogen fixation, soil fertility, and overall viability, and partnered with individual researchers at University of Vermont to investigate the impact of essential oils on pest and parasite diversity and to create a State of Soil Health compendium for the state. The farm has also partnered with Audubon Vermont’s Bird and Bee Friendly Farming initiative.

Two years ago, Swift and McCargo put a pause on the dining facilities and market to reassess their operation and plan for the future. Last year, they began the process of transitioning Philo Ridge Farm to a nonprofit foundation, which will better position the farm to pursue opportunities in farming science, research, and education.



The farm’s Market Store, which sells everything grown on the farm and other local wares, will reopen this summer.

“After a transformative and deeply rewarding decade, we now want to ensure that Philo Ridge Farm will be a multigenerational community asset,” McCargo and Swift wrote in a letter to the community.

His wife, an excellent cook and advocate of farm-to-table dining, is currently writing a cookbook that will provide inspiration for food served at the farm when the market and dining operations reopen this summer. She takes the lead on the market, hospitality, and vegetable and fruit gardening operations and has guided the aesthetics of the farm’s design and layout. Swift oversees pasture management, livestock breeding and slaughter, and food production.

Despite the demands of the farm, Swift and McCargo find time to enjoy skiing, bicycling, hiking, and travel. For 30 years, Swift has played acoustic bass in a local band—serendipitously named The Meat Packers—that plays music events around the area.

Although he still doesn’t consider himself a farmer, Swift helms a fully functioning farm that’s made its mark on the Vermont landscape.

“We’ve got an outstanding facility. It’s a beautiful, working farm but it’s part of something bigger,” he says.

“Everything we do is rooted in our commitment to honoring our natural and human environments; to improve the soil to produce nutrient-dense foods that taste better and improve human health and uphold the integrity of the land.” ■