

FELLOWSHIP BRIEF

Large-Scale Organic Farming in Montana's Great Plains: Vilicus Farms

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The Need.

Sustainable, organic agriculture is key to support ecosystem health as well as offer humans nutritious, pesticide-free foods. Organic agriculture currently accounts for <1% of the 911 million acres of U.S. farmland. It is vital that we shift agricultural practices, food policy, and economic structures to enable profitable and scalable sustainable farm businesses. In order to prepare for a career that supports sustainable expansion of organic farming, Tim interned with Vilicus Farms. Vilicus Farms is at the vanguard, pioneering large-scale organic farming methods in Montana. They are simultaneously inventing new credit, land rental, and buyer contracts, thereby redesigning not only the farm, but how the farm fits into a larger supply chain and economic system. Tim learned firsthand the challenges and opportunities an individual farm faces as it grows into a large-scale organic farming operation.



Throughout the season, Tim took soil samples and estimated yields while scouting the fields. Photo by Tim Ibbotson-Sindelar

The Project.

Tim immersed himself in daily life at Vilicus Farms, a 9,600-acre organic, dryland, grain, pulse and oilseed farm near Havre, Montana. Throughout the summer Tim assisted with day-to-day operations including maintaining farm equipment, processing crops, rotating cattle, controlling weeds, sampling soil, surveying cropland, estimating crop yields, and swathing fields. Tim also collaborated with Vilicus Training Institute to investigate mechanisms to mitigate risk and share rewards across the organic food supply chain. Tim examined contracts between farmers and buyers to understand contract clauses that promote sharing risk and rewards related to uncertain yield and variable climate. Vilicus Farms and Tim have authored a paper that summarizes their findings and suggests practical and replicable contract mechanisms that could support sharing of risk and rewards in order to promote resilience within organic farming.

The Findings.

This was a critical experience for Tim as he had never worked on a large farm before, but plans to pursue a career that contributes to organic and sustainable farming in the United States. Tim not only learned the agronomic principles underlying Vilicus Farms' operations, but he also experienced the practical realities of large-scale farming that cannot be taught in books: he learned to appreciate the importance of tractor care, the time intensiveness to complete USDA paperwork and grants, and both the joy and the isolation of living within rural farmland. Additionally, this experience allowed Tim to author a paper with Vilicus Farms that connects economic restructuring principles in the food system with detailed, actionable steps farms and buyers can make. It includes a focus on a novel contract that Vilicus Farms is piloting with a grain processor that addresses four major issues farms face. These are cash flow constraints in the growing season, long-term planning needs for multi-year crop rotations, financial instability due to yield and climate instability, and high administrative time required to market specialty crops. Ultimately, Tim left the farm with a greater appreciation for the agronomic and economic struggles that a large-scale organic farm faces, and a renewed drive and sense of urgency to transform U.S. agriculture and food systems.

The Impact.

Vilicus Farms is pioneering a large-scale organic and ecologically responsible farm in the Northern Great Plains that can serve as a model to others in the region. By serving as a model and welcoming learning, Vilicus Farms can assist others that are interested in transitioning to organic, dryland farming. To that end, they train and support apprentices and interns to provide them with the knowledge and experience they will need to start their own operations. Vilicus Farms also is involved in regional and national conversations about how for-profits and non-profits can support and grow sustainable, organic farming in the United States. Tim's assistance to Vilicus Farms contributed not only to their day-to-day efforts to have a successful season, but also to Vilicus Farms' mission to spread their vision and economic innovations to other farms and throughout the food system.

The Student.



Tim Ibbotson-Sindelar is a joint Master of Environmental Management and MBA candidate at the Yale School of the Environment and the Yale School of Management. He is studying U.S. food and agricultural systems with the aim to shift the present paradigm to support the health of ecosystems and humans, and create financial incentives and stability for farmers to improve their land and local ecosystems. He holds a BA in economics from Haverford College. He previously worked as a financial litigation consultant, and more recently as a produce procurement analyst at an online grocer.