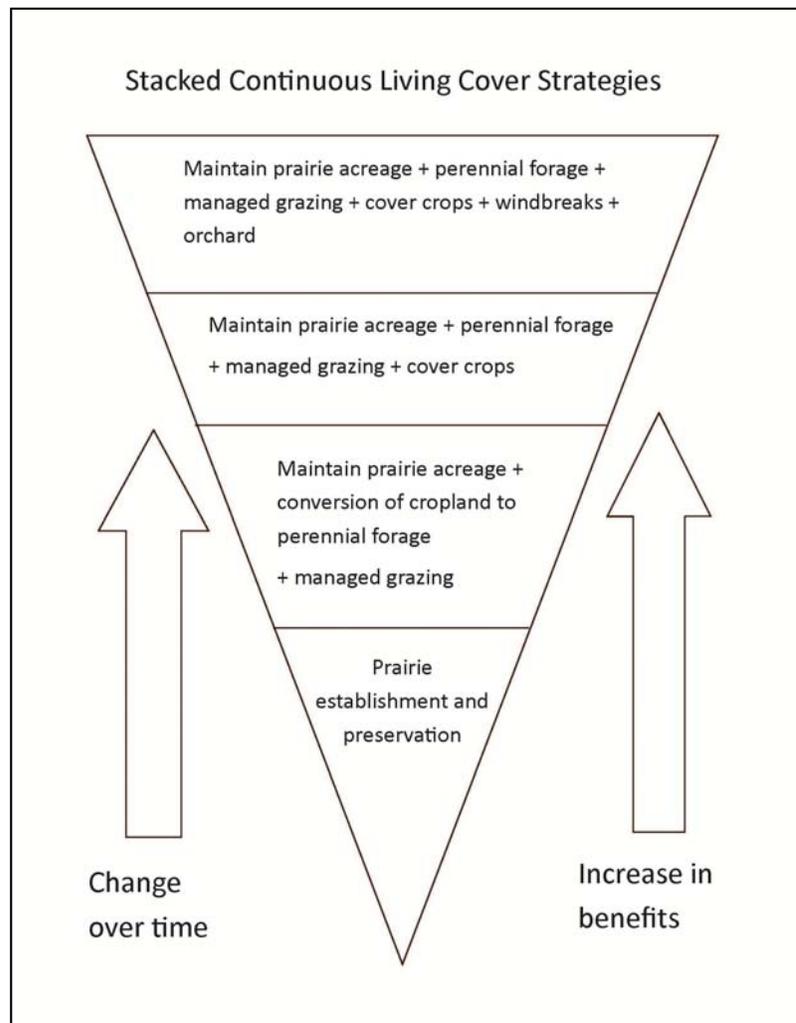


Prairie Horizons Farm



Mary Jo and
Luverne Forbord
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The area now occupied by Prairie Horizons farm was first surveyed in 1868, and the surveyors' notes say that it was tallgrass prairie with scattering oak. They are in an area of undulating hills that are the beaches of ancient Glacial Lake Benson, a forerunner to the more famous Glacial Lake Agassiz. There are many rocky hilltops that are not ideal for plowing, which has helped to preserve some patches of native prairie.



Stacked continuous living cover strategies: The Forbords started out with preservation of prairie remnants and re-establishment of prairie areas on their farm. Their goal is to continually move toward perennialization, putting more fields in perennials and adding more strategies that build on and reinforce each other. Maintaining the system as a whole is important.

Farm History

Both Mary Jo and Luverne grew up on West Central Minnesota farms that included diversified crop and livestock production. When they purchased the Forbord family farm from Luverne's parents in 1985, they also inherited the pressure to produce more by purchasing more inputs, but didn't truly become a high-input dairy operation until 1998. "We were selling commodity milk and grain, with very little control over the price we received. To stay profitable, we had to produce more milk and more commodity grains for sale. We started using a total mixed ration, more supplements, antibiotics, and rBST for the dairy cows to obtain a high rolling herd average, but the work to get it done was killing us," says Mary Jo. "We had to change." They decommissioned the dairy in 2002, and began the

"We have heard people say that the reason we have so much grassland on our farm is because it's all marginal ground, but that's not true. We are surrounded by conventional crops. We ourselves used to get more than 200 bushel per acre corn yields, using injected dairy manure as fertilizer. Our shift to perennials was a choice, and not one forced upon us by poor yields or marginal land."

– Mary Jo Forbord

Luverne Forbord bought his first 160 acres of land at the age of 19, and it is still part of his and Mary Jo's holdings. They farm in the place farmed by Luverne's family. A brother recently sold his property to the west of theirs. Their son Jaiden bought his grandparents' farm, visible from the hillside just to the west of the Forbord's current home.

process of transitioning to certified organic production, converting their land to perennials and producing grass-fed beef.

Perennialization

Prairie Horizons Farm features about 100 of its 480 acres in original native prairie vegetation, and has restored native prairie, perennial forage mixtures or trees planted on most of the remaining acreage except for 55 acres that are annually cropped. There are 250 acres set up as rotationally-grazed pasture with water lines. All winter feed and grazing for 150 Lowline Angus beef cattle is supplied by that 250 acres, with occasional grazing or haying of the native prairie areas.

Luverne and Mary Jo have made Prairie Horizons Farm available to researchers, and have some acreage dedicated to research plots. Research on perennial biomass production for biofuels has been studied at their farm since 2008, looking at biomass production under several fertilizer treatments, including commercial fertilizers and manure. The Nature

Conservancy has a transect on 40 acres of grazed land, and those researchers are finding a wide variety of bird species.

The farm is enrolled in the Conservation Stewardship Program (CSP). There are also conservation easements protecting prairie potholes on the west side of the farm. They do “flash-grazing” of those areas to keep brushy growth down and maintain the perimeters of the ponds in a classic prairie pothole condition. They are seeing a lot of bird use of those areas.

Resilience

The Forbords are constantly observing all aspects of their land: the plant species, flowering times of native plants, bird species, soil condition, pasture condition, health of the cows. Part of that observing involves the performance of their perennial polycultures in weather extremes. Their perennial pastures and hayfields are planted to a diverse mix of species, modeled after the prairie diversity. That system barely missed a beat in 2014’s spring of unprecedented rainfalls. In contrast, their 55 acres of row-crop ground was not workable at all due to wetness.

Foregoing a cash crop is a difficult thing financially, but it is possible for them because the productivity of the perennial acres can carry the whole farm through that rough patch. Productivity of the remainder of the farm also allows them to maintain the native prairie acreage. The majority of those prairie acres are not set-aside acres in any program; maintaining them is a choice and a commitment that the Forbords have made.

55 crop acres with no 2014 crop

Luverne had planted a rye cover crop in fall of 2013, then turned it under as a green manure in spring of 2014. Then the rains began. The Forbords gave up an oats contract because they couldn’t get onto the field. Now they are looking at planting another cover crop in that field in preparation for a future cash crop, but are also considering converting that field to perennial forage.

Agroforestry

A windbreak of conifers runs along the south edge of the 55-acre crop field, and windbreaks around their house consist of conifers and ash trees. Mary Jo points out that these are not native species to the area. Despite the region's history as a tallgrass prairie and the remnants of prairie on the hilltops and hillsides, she was mostly unaware of "prairie" as a concept until the 1990s, when she started learning about the diversity of prairie plants and how they function together to form a resilient ecosystem. Burr oak trees are native – part of that original "tallgrass prairie with scattering oak" – so the Forbords are working on renovating windbreaks on their property with plantings of burr oak.

They have also added a diverse fruit orchard near the farmstead of the former dairy operation. In the spirit of the Forbords, it is not merely for fruit production but also for testing, observing, and conserving the genetics of native fruit species. They intend that this will be a profitable venture once the trees and vines are fully established, and have plans to add a fruit marketing and processing enterprise to the farm to handle the orchard's output. Their farm is certified organic, and they maintain that certification now primarily in order to have some legal protection against spray drift affecting the orchard.

Cultural Preservation

The Forbords are attuned to the rich cultural heritage of their area, pre-European settlement. They find evidence of Native American presence on those hilltops on their farm, and local historians believe that there are graves on one of the hills nearby. Mary Jo has studied the medicinal properties of the native plants that they find in their prairie areas – knowledge that people there before her and Luverne's ancestors had and used. The Forbords are seeing a recent shift in their area toward removal of the hilltop rocks for use in home landscaping and tilling of the native grassland areas, and are distressed at the possibility of losing an important piece of the area's culture and history. "The native

Joraan's Orchard

Multiple varieties of berries, plums, cherries, grapes, apples, pears, and even some peaches and apricots grace "Joraan's Orchard," planted in memory of their eldest son who died from sarcoma at the age of 22. That loss was not only of a beloved child, but also of their farm succession plan: Joraan had intended to take over the farm and live on the dairy farmstead. The Forbords are exploring innovative ways to pass on the farm that will satisfy their commitment to continued stewardship of the land and help more young people start farming.

seedbeds are still there on those hills,” said Mary Jo. “If you stop tilling, the prairie plants can come back.” She believes that we ignore the wisdom of earlier cultures at our peril.

Part of Mary Jo’s commitment to preserving cultural heritage on her farm has been to use a tilled field edge to grow out a Native American squash. She received nine of the rare seeds as a gift from Winona LaDuke a few years ago, and has since increased the seed, gifted seed back to Native American gardeners, and is growing a quarter-mile-long row of squash (1,000 plants) this summer. That will supply additional seed for giving away, plus a large amount of squash with which she intends to test the potential of the aggregation and distribution market to handle her crop.

Barriers and Rewards to Perennialization

The Forbords’ perennial system is not a commodity-product system. They are raising beef, not dairy; so they are not getting a milk check, and there is a considerable lag time between investing in the cattle and getting a return on that investment. Barriers that they see to other farms doing what they have done:

- Lag time for cash flow
- Lack of incentives (either program or market incentives)
- Management intensive
- Challenging to pull all of the pieces into a whole system
- Technical assistance for agricultural production using perennial polycultures is extremely scarce.

It is also rewarding for them to meet those challenges and see their whole farming system work in a way that is beneficial to themselves, their immediate surroundings, and the larger community.