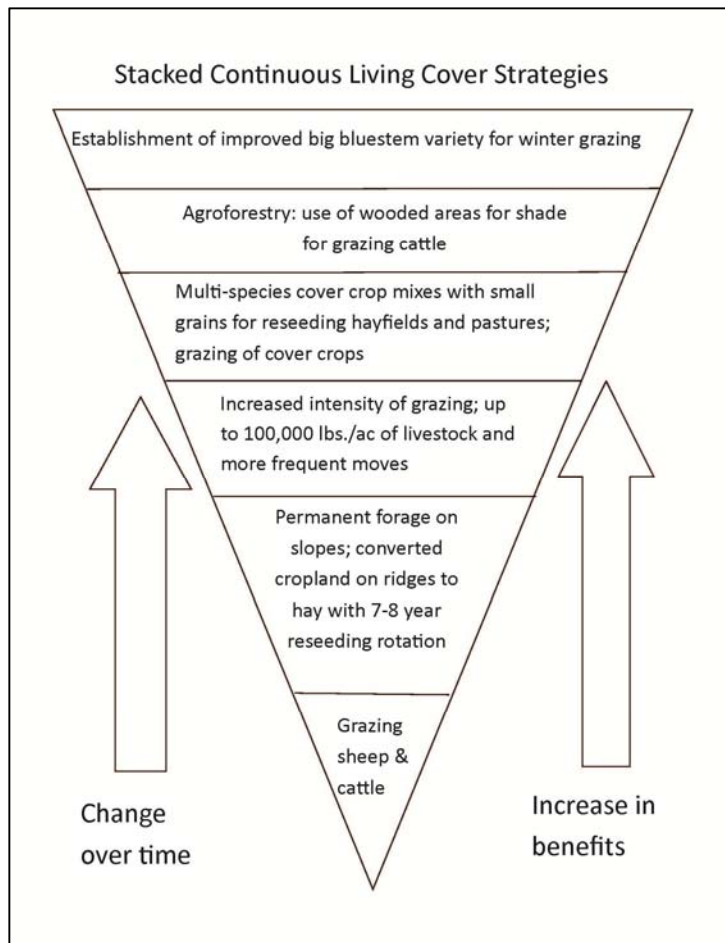


Gene Schriefer



Summer 2015
Continuous Living Cover Series



Dodgeville, WI; July 2015

Gene Schriefer's farm is 260 acres, of which 105 are steeply sloping and in permanent pasture and 135 are tillable. The remainder is wooded or under buildings. The farm was purchased by his parents in 1983. They still live on the farm, but Gene has managed it for most of that time. The Schriefers are originally from New Jersey and Gene grew up with fruit, vegetable, and small-scale livestock production. After moving to the Wisconsin farm, he began grazing sheep and cattle with the main emphasis on sheep. He eventually built the flock up to 420 ewes. More recently he has shifted more

Stacking of continuous living cover: Gene started out with grazing, primarily of sheep but gradually shifted to beef cattle. He uses a rotational grazing system with permanent pastures on his sloping areas. Short-duration grazing with a high stocking rate has improved his pastures. He employs an agroforestry strategy of using wooded areas as shade for livestock during hot spells in summer. Cropland on the ridge-tops has been converted to hay and pasture with a seven- to eight-year reseeding schedule. He uses a cover crop mixture of three to seven species along with a small grain crop in the reseeding year, and the cover crop is grazed after small grain harvest. He is experimenting with improved big bluestem and indiangrass varieties with an eye toward winter grazing for the cattle as well as a forage that can withstand a summer drought.

toward beef cattle. The current operation includes 45 cows plus their calves and youngstock, and 80 ewes. Currently he strives to graze at least until the end of November, and usually makes it to mid-December before feeding hay. The end of his grazing season is dictated by onset of winter weather rather than by lack of forage. He thinks he would be better off with an increased stocking rate to use all of the available grazing and then buying more hay – but also notes that the market landscape is constantly changing, and increased hay prices in the future could change his mind. He is experimenting with some stockpiling of forage for winter grazing.

Gene says that his farm is better at growing forage than it is at growing corn. Corn crops on his place have yielded 150 bu/ac, which is below the county average.

Hay, on the other hand, averages 4.5 tons/ac with 5 tons/ac in a good year, which is good in his area. Tillable acres on the ridgetops include a 50-acre field that is rented to a neighboring dairy farm. This field is in alfalfa hay for three to four years, put into a row crop for one year, and then back to hay. The remaining tillable acres are in a hay-graze system: one to three cuttings of hay and/or rounds of grazing before Labor Day, depending on forage demand and growth; then delaying further grazing until November and December to the extent possible. This harvest and grazing schedule matches the plant dormancy cycle: pasture plants are allowed to grow and build their root reserves in September and October, and then are grazed after going dormant for the winter but with care to leave 3” to 4” of stubble to protect crown buds and tillers that will grow the following spring. Gene notes that he always needs to think ahead to the next season: grazing before dormancy in the fall would cause the plants to use their root reserves and set them back for the following spring.

His permanent pastures on the steep slopes are never tilled. He interseeds them with a no-till drill as needed. He uses managed rotational grazing, with permanent fencelines

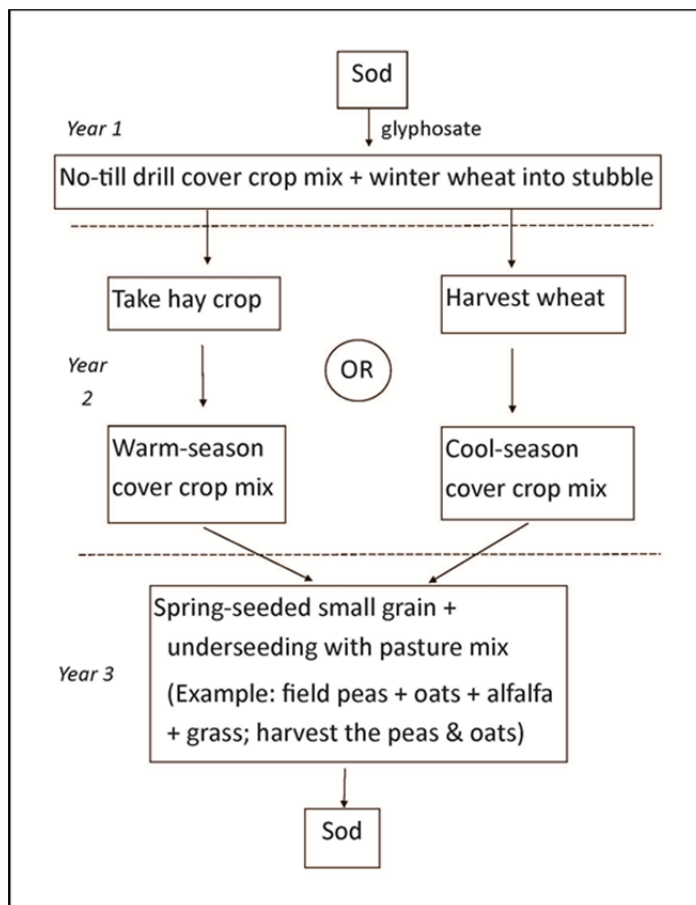
Calf Management & Marketing

Calving is from early May to the end of June. Calves are weaned in November or December. This is earlier weaning than in a typical grass-fed beef system, but Gene has had better luck with this system than with keeping calves on the cows through the winter. Weaned calves have shelter in a shed and are fed high-quality forage, but no grain since some are marketed as grass-fed beef. Gene markets beef through several channels. A few are sold locally to individual customers. About one-third of his steers are sold as grass-fed beef to the Wisconsin Meadows Co-op. The remainder are sold through a local livestock auction. Lambs are mostly sold through the livestock auction, with a couple per year sold locally to customers.

following the contour of the hillside and then cross-fencing moved every two to three days for cows or every one to one and a half days for youngstock. A gravity-fed watering system includes a reservoir on the ridgetop and water lines down to every paddock. He began investing in watering infrastructure 15 years ago and can now get water to virtually every point on the farm, which facilitates the managed grazing system. He needs to finish installing high-tensile perimeter fence in a few places but can graze on virtually the entire farm. He has been gradually increasing his stocking density on pastures and began to see positive impacts on the pasture sward and soil health at 50,000 lbs. liveweight/acre. He is now up to 100,000 lbs. liveweight/acre. Soil test results from 25 years ago show 2% organic matter. Soil samples from those same fields now show 4 to 5% organic matter. Gene would like to get the organic matter percentage higher, but seems to have reached a plateau in the progress he can make with managed grazing.

The cattle are outwintered (fed hay outdoors on the fields during the winter), and the paddock where outwintering takes place rotates on a 12-year cycle. The outwintering results in waste hay and manure being applied to the paddock, giving it a boost in soil fertility. He feeds hay daily to minimize waste, and unrolls round bales to ensure that all

animals have access to the hay. The sheep also outwinter unless hay is high-priced; then they are fed in a shed where Gene can control their hay consumption better and minimize waste.



Reseeding Pastures

Pasture mixes always include a legume, a grass, and a forb. He uses birdsfoot trefoil, alfalfa, and/or clover in combination with a grass. He likes birdsfoot trefoil because it maintains production and quality during the hottest part of summer. He always adds two to three pounds of chicory seed into the pasture mix. Chicory has a deep taproot; he has found chicory roots at the bottom of a four foot deep posthole. The

chicory tends to disappear from the pasture mix after about four years, but in the first years of a new seeding it is pulling up nutrients from deep in the soil profile. Gene doesn't have a set schedule for reseeding of pastures: pasture stands are renovated depending on the stand density and weediness. Generally reseeding takes place every seven or eight years. Reseeding is done with a no-till system (see graphic). Gene has seen good yields from the cover crop in his reseeding system: about 1 ton/ac in a drought year, and up to 2.5 tons/ac when moisture was adequate.

Gene finds that he can raise beef cattle very inexpensively on pasture up to 800 to 900 lbs. of liveweight. Finishing on grass is more difficult. He reserves the cover crops and the higher-quality forage growing on his tillable acres for his finishing steers and heifers and finishing lambs. The cows graze the permanent pastures on the non-tillable acres and generally get a more mature, less leafy forage than the youngstock. He estimates that the cows take 14" forage down to 5", and the steers and heifers take 10" forage down to 5".

Gene strives to have comfortable conditions for his livestock. Summer heat is becoming a concern and he expects to see more 90° to 100° days in the future. He has two paddocks near wooded areas that he reserves for hot spells: the cattle can graze in the cooler mornings and evenings and stay in the shade during the day. If the hot spell lasts longer than three weeks, though, those paddocks run out of forage and he needs to adapt by letting the cows go back to shade during the day from more distant paddocks. He is experimenting with a portable shade structure for the cattle.

More frequent droughts are also something he expects to see in the future. The drought of 2012 required him to take the drastic measure of selling all of his youngstock in order to keep his breeding herd intact. He thinks that if he had had some areas in warm-season native grass, he could have had a better outcome. In 2013 he planted 12 acres of ridgetop field into an improved big bluestem variety out of a Nebraska breeding program. Native warm-season grasses take some time to establish and he's still seeing an uneven stand, but is hopeful that the stand will be good in its third year. He planted more native warm-season grasses in 2014. Gene is looking to these grasses to hold winter snow cover, improve water infiltration, and to withstand drought. He notes that they have a four to five times larger root system than cool-season grasses. Besides looking to the native grasses as a hedge against climate change, he's also interested in seeing if the cattle will graze the dormant grasses in mid-winter, which might allow him to eventually reduce or eliminate his hay feeding.