

Georgian Central **Soil & Crop Improvement Association** ***Summer Bulletin, 2022***

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Stemmler Farms, Bruce County SCIA
Doug Stemmler, Jonna Ebel, and their 'Security Dogs', Elvis and Hoss

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Member Spotlight

Doug Stemmler is a Bruce County cash cropper and member of the Bruce County Soil and Crop Improvement Association. He and his wife Jonna Ebel operate 190 acres of farmland just south of Port Elgin, along with the help of their two “security dogs,” Elvis and Hoss. They farm with a strong focus on soil health and improvement of ecosystems on their land.

Doug was raised on a farm in Perth County where they milked Jersey cows, grew replacement cattle, and sold eggs, pork, and beef. He spent a number of years custom feeding and grazing western calves on a farm in Saugeen Township while also working at Ontario Hydro and Bruce Power. Jonna holds degrees in Resource and Environmental Management, Education, and a Minor in History. She worked as a teacher for twenty five years and helps with farming at times when a second body is needed. Doug and Jonna purchased the farm where they currently live in 2002, and then added a second property across the road in 2013. They grow IP soybeans, winter wheat, and cover crops, and harvest hardwood lumber and honey. They joked that they grow songbirds as well and are now “chasing the bat world” and installing houses for those.

Doug says that the farm has been 100% no-till since 2016 when he attended a Coffee & Crops day sponsored by Ridgetown College and gained a deeper respect for the benefits that can come with the practice. During that day they looked at testing for insect populations, soil erosion, and water infiltration. He started monitoring his own land and has been impressed with what he has seen. At that time his neighbour, Bob, was still doing their planting. Doug wanted to plant green into their cover crops. Bob had some reservations, but they went ahead and tried it and it was a success. Doug says that he remembered a similar situation nearly forty years ago when he was custom grazing cattle. He hired a custom operator to no-till soybeans into a hayfield where the hay stand was a foot high at planting. With the amount of organic matter in the soil, and cattle manure that had been applied previously, the soybean yield was impressive. That good experience gave him confidence to re-apply the technique in 2016, and he has not turned back since. When Bob got to the point of retiring Doug was able to buy equipment from him and now does all of the work on his own.



Doug's no-till machinery

Their goal is to keep “roots in the ground for 365 days of the year”, using cover crops as the third component of their rotation with soybeans and wheat. When they started planting them in 2016, Doug was recommended a thirteen way mix. From that they have made adaptations, testing and qualifying what works on their farm. Doug said that he selects species for traits such as root mass, benefit to pollinators, weed suppression activity, nutrient return to soil and suitability to

ground type where they are planted. He shared that a popular species on their farm is tillage radish – not only for the benefits it delivers to the crop, but also as an annual competition with the grandkids to see who can find the biggest radish in the field!



Fields at Stemmler Farms - note the strips created in the field on the right, from planting that day

He noted that seeding rates are often recommended at higher rates per acre, but he tries to keep his on the lighter side. Too heavy a cover crop can mean too much root mass for the no-till drill, and too much soil cover in the spring means cooler temperatures and slower seed emergence. Conversely if the rate is too light, then return in benefits becomes low. Some of the benefits that Doug noted include moisture retention, decreased erosion, and cooler soil temperatures during the summer heat. Planting into live cover crops helps him navigate poor planting conditions in springtime, and he also gets less hairpinning than when trying to plant through dead matter. He said that if he can minimize herbicide application by using covers for weed suppression it helps with the bottom line too. Doug mentioned that he double plants the cover crop into the headlands, high knolls, and valleys as a strategy to reduce compaction and erosion in those areas. As with most farming practices, testing and finding the balance point is important.

Cover crops go in immediately following wheat harvest and stay until soybeans are planted between the third week of May and the first week of June. Wheat follows soybean harvest, and the cycle starts again.

Doug uses inoculant and a liquid starter fertilizer at planting time and does a full roster of soil and tissue testing to monitor nutrient needs throughout the rest of the growing season. He said that they soil sample following wheat and do three additional tissue tests throughout the growing season to monitor nutrient uptake by the plants. They explained that having the nutrient in the soil does not always guarantee the plant will be able to make use of it. Mineral interactions can prevent uptake of certain nutrients, and tissue testing may give you the clues needed to recognize the deficiency, even when soil levels seem high. It helps them make decisions for foliar applications as the season goes on.

Another choice made in the name of promoting soil health, was to use EcoTea seed inoculants and fertilizer which they buy out of Hensall. They use the products for both the soybean and wheat crops with the goal of enhancing soil biological health and encouraging mycorrhizal development. Last year Doug watched a YouTube video of a Johnson-Su bioreactor and wanted to see if he could make his own. He said that he was not convinced it would work, but that he had all the material for it,

Member Spotlight cont.

and it made a good project. They collected leaves from friends, neighbours and curbs to fill it with, and in five months he had a compost tea which he used on his crop. They had a nutrient test come back on the liquid which showed values within the ranges of a manure sample. Doug said that he did not get enough of the particles filtered out of the 'tea' and ended up plugging the filter on the liquid drill, so there is still a bit of a learning curve to be worked out.



The Johnson-Su Bioreactor

Overall however, it was a good venture and he is looking forward to using it more in the future.

Out of the 190 acres, 144 is in crop production. The rest are composed of 36 acres of hardwood bush, and an 8 to 10 acre environmentally sensitive area along a creek. Doug and Jonna said that most of that area was already protected land when they bought the farm, although they did add a buffer to the second side of the creek themselves. They completed an Environmental Farm Plan (EFP) and were pleased to find that the practices they were using on their farm were mostly in line with recommendations already. By holding the EFP, they were able to take advantage of the Species at Risk Farm Incentive Program and Species at Risk Partnership on Agricultural Lands programs offered by OSCIA.

Five years ago they got involved with ALUS Grey Bruce to do a tree planting project on the one property. They have now planted 2500 trees for a windbreak and wildlife corridor. They also changed two acres in a wet area into constructed wetland. Doug noted that one really good project he implemented was a grass waterway on one property. He said before constructing it water was always eroding the topsoil and creating a trench. A friend recommended he give the grass waterway idea a try so Doug sloped the area and planted grass seed to hold the ground in place. When spraying cover crops off he avoids that area to leave the grass intact, but when planting he drives and plants right through it. It has made navigating the field easier, and he is no longer leaving ruts with each pass.

With all their soil health and environmental initiatives in place, they have enjoyed seeing a surge in bird and insect populations. Doug and Jonna both mentioned that they love watching birds and were excited to have a Harrier hawk hanging around consistently, seemingly enjoying their grass waterway and the habitat it was providing for small prey. They have noticed large numbers of dragonflies, gnatcatchers and flycatchers, and recruited the help of Field Crop Entomologist Tracy Baute, to identify a Polyphemus Moth caterpillar on their deck last summer.

With input from OMAFRA specialist Anne Verhallen, Doug learned to trap and count insects as another monitor of crop



Polyphemus Moth caterpillar

and field health. He says that in 2017 they had a large population of slugs living happily in their desiccated cover crop. It was not until sixty days after planting that he began to see a rise in ground beetles which would control the slug population. He credits this beetle

population boom with the expiration of his seed treatment and from that point forward has planted only untreated soybeans. This year he has also experimented with untreated wheat seed and will take the first crop of that off in the fall. In



Insect traps in field

another insect monitoring incident, Doug said that he attempted to trap wire worms but found that skunks had stolen the majority right out of the traps before he could count them!

In terms of challenges on the farm Doug says that Mother Nature is always the biggest curve ball, although he feels that their no-till and cover cropping practices have allowed them to handle swings in rainfall and temperature more easily than before. Issues facing agriculture at large which concern him include the lack of progress with reliable rural internet, the amount of agricultural land that is taken out of production in favour of being built on, and the need for us all to act more on climate change.

In closing, Doug noted that the no-till and cover cropping practices that work on his farm do not necessarily work on every farm. He says, "the key is to take it slow, try one thing at a time, and keep what works for you." He noted that he is very impressed with the industry and the amount of knowledge transfer available. From the caliber and expertise of our Certified Crop Advisors to the number of magazines, pod casts, videos, and tips shared on Twitter, there is no limit to learning. Doug says that he and Jonna feel proud to grow food for the world and that their goals for the future include watching their bottom line, monitoring soil and plant health, and enjoying life.

I would like to thank Doug and Jonna for taking the time to speak to me, and for telling us a little about their farm and values. It has been a pleasure to learn more about their operation and we could not have a member spotlight without producers who are willing to share with the region!

Emily McKague

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