

Submission regarding Councillor Muench motion 14.1 for the April 14, 2021 Council meeting.

As small farm owners and operators and beekeepers we've experimented a great deal with small farming including organic urban agriculture, companion planting, and soil restoration over the past 11 years. Our 25 acre farm is located north of Bethesda Rd and north of Haynes Lake along the east side of Leslie St across from Diamond Back Golf Club. What brought us into small farm ideals including organic urban agriculture early on was a visit by an area farmer back in 2009.

In 2009 as new farmers we were and still are eager to learn everything we can about small farming. It's been our vision and our goal from the first day that we moved into this small farm that we successfully make the land be sustainable, both from an environmental and financial standpoint. Unfortunately over the past 11+ years we've learned that soil based organic urban agricultural farming is very difficult here on our part of the Moraine due to the very dense alkaline clay soil and hardpan deposited by the receding ice sheet during the last ice age. Industrial farming nor neglect are not the causes for the poor soil on our land as it's not been possible to bring in large equipment due to the narrow driveway access into our farm. We've learned the hard way that the fix here to allow sustainable soil based farming is not easy as the natural landscape and soil granularity is very challenging from an organic urban agriculture standpoint.

One of the first people to visit us after we moved into this area was the late John Doner. Mr Doner explained to us back in 2009 that his large farming equipment would not fit through our farm entrance so we should look for alternative ways to farm the property. John pointed out to us all of the invasive Common Buckthorn trees growing on our farm and told us that this is likely an indicator that we may have some challenges with regard to soil restoration ahead. It was this advice from Mr. Doner that led us to begin seeking knowledge about specialty crops, organic farming, companion planning, creating test beds, and this in turn lead us to seek ways that we might be able improve or restore the soil on our farm.

Our farm is on one of the highest elevations found on this part of the Oak Ridges Moraine. Why is that? We believe the main reason is that the soil here resists erosion. The makeup of the soils here on our ridge is hardpan mixed with very, very dense clay soil that has resisted erosion over millennia. At our high elevation the wind speeds here are much greater than surrounding areas and most of the good soil that was deposited by the ice sheet some 10,000 years ago has long ago blown or eroded away. What remains on our farm is not erodible (is that a word?). In fact we have not found any piece of equipment that can dig through some parts of this hardpan aside from a drilling rig made for well boring through rock.

We've spent a great deal of time and money over the years looking for the best areas on the farm to plant test beds of specialty crops to make farming work here. In order to overcome the soil issues and begin soil restoration we've attended numerous training seminars about soil based farming offered by both the Ontario Soil and Crop Association and the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA). We've purchased a wide selection of small farm tools. We've read books on small farming, companion planting, organic soil theory and we've had the soil analyzed by the lab at the University of Guelph and other labs in the USA. In every case the soil analysis returned to us points out that our soil must be amended for both PH and various nutrients and as the heavy clay doesn't allow the soil to drain.

Over the years we've planted with minimal success crops such as Sweet Corn, Haskap (honey suckle) Berry, Blueberry, Pumpkin, Sweet Potatoes, Tomatoes, Beans, Alpha, Cherry, Saskatoons, Sainfoin, Sunflower, various cut flowers, Raspberry, and Sea Buckthorn. We've used companion planting theory to introduce biodiversity by mixing rows of plants with native grasses & flowers. Every year we plant green manure crops on the soil (buckwheat, winter rye etc) to reduce further erosion and provide nutrients to our heavy soil but this has had minimal effect. After countless trials and after bringing in many truckloads of compost and topsoil from nearby Miller for test beds we thought we finally found two specialty crops suitable for the shallow heavy soil. The first was haskap berry (honeyberry) and the second was Sea Buckthorn. However, after 4 reasonable years of growth two of the six groves we planted suddenly started to die last fall (Sept through Oct 2020). We dug out some of the dying plants for analysis by the OMAFRA team at the University of Guelph. To our dismay they said the plants have root fungus and worms that were likely brought on by the poor soil drainage, high alkalinity, and a poor nutrient profile that exists below the soil that we brought in from Miller. We don't know, and they don't know, an easy way to save these dying groves. Unfortunately we didn't know about the fungus and worms in late 2019 and early 2020 as we had just completed planting over 600 yearling haskap berry plants, sour cherry, sea buckthorn, raspberry along with companion plants in the spring of 2020 and these plants will very likely meet the same fate in years to follow.

The challenges we've faced with organic urban agriculture brought us to the one bright spot for our farming operation and that is managing honeybees. Our honeybees up until this year had been doing quite well here on our farm; however, this spring we have experienced heavy winter losses and the bees are not looking nearly as healthy here in Richmond Hill as they do in the over 10 remote bee yards that we manage away from Richmond Hill. We believe this is due to the loss of a great deal of forage area in Richmond Hill over the past year. Lost forage areas include the two Go Stations at Gormley and Bloomington (paved over land) and the large housing development under construction to the south of us on Leslie street north of Stouffville Rd. We also believe the light pollution from the Go train layover facility and the new Go station at Bloomington are contributing causes to bee mortality and reduced vitality at this site.

We have been able to keep the honey business in operation as we now have moved most of our bee colonies off of our property onto other farms that are in more prime agricultural settings like Georgina, Mount Albert, King, and Whitchurch Stouffville. This has been an ongoing process over that past three years that has allowed us to keep going with our vision and goals.

Back in 2019 after a few successful years of growing Haskap and Sea Buckthorn we had hoped that 2021 would be the expansion year for our farm. We very much looked forward to a period that we could make our small farm sustainable and possibly profitable. However, things aren't starting off to a great start in this regard with our bees doing poorly and our plants in distress and we firmly believe now that this dream of sustainability won't happen in 2021 or ever. Encroaching developments, increased traffic, plans to widen roadways and highways, poor soil, high winds, and the small size of our farm all lead us to conclude this isn't a site that organic urban agriculture will never be sustainable. Therefore we support the motion 14.1 by Councillor Muench for the April 14 meeting that seeks to undertake a review of other uses for this area besides agriculture.

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