ML's Greenery in Motion
2019 Newsletter

"We know soil is alive. In fact, in one tablespoon of healthy soil there are more microorganisms than there are people on this planet. A highly functional, thriving soil has the capacity to store carbon, absorb water like a sponge, and support a thriving landscape. For years we have viewed soil through its physical and chemical properties, and we are beginning to realize the crucial role of biology in soil function and health. Now we are finding that from back yards to farms to greenways to commons to gardens, how we treat our soils has implications for the global climate." Bryan O'Hara

Welcome to the new season everyone! A slightly different winter with lots of cold and rain…not usual for us although perhaps for the Carolinas… with a flip to snow and snarky cold at the end. It will be interesting to see how everyone's perennials came through the winter. We have a two huge phlox (Phlox cv Jeana) that I suggested we move to the corner of the house. Margherita said we had nice black-eyed-susans there, so why would we move them? Then she figured it out; they might not have survived because of the deep dry, cold without snow cover of January. It remains to be seen just what the damage will be… now we wait…

The farm is ticking along in its usual late-winter, early-spring, mud season way. Winter pen clean-out got held up due to the weather but we're now chewing our way through them and working onto the HK beds. Our first round of babies is due in April and the last in mid-August - weird breeding year (we think because of the up and down temps). This year, we're on both the Westminster Historical Society Garden Tour (July 20) and participating in the second annual Rocky and Rockette Farm Tour (August 3). For those of you who know Connie, our little doe that was so small last year, she's has finally begun to grow and still loves people and has a sweet personality.

The ducks are still in good shape and are beginning to come back into lay with the longer (slightly warmer) days... We're wrestling with bringing in more or letting the flock reduce in size -perhaps some Silver Appleyards or Welsh Harlequins... We can go either way most days. We'll see.

I went to more conferences this year, got exposed to all kinds of new ideas from something called pollarding – a very OLD technique that uses trees to provide food for goats and other herbivores – like cows (Margherita attended that one as well and said absolutely not!!! – I admit it's a little raw looking…) to urban farming challenges and talked to more people than I thought possible. I presented at one on building raised beds (more on that later) and moderated a challenging one on the complexities of invasive and aggressive species (knotweed and deer!). Discussion definitely became heated, but we also found some middle ground. It's both refreshing and exhausting being exposed to new ideas and new perspectives and processing everything through. That's what winter is for – the thinking of new ideas.

Winter is also the only time of year that I get to work with my horse Breezy. The rest of the year she's a very attractive lawn ornament! She's 28, and we're both still learning and growing. I have a good friend who has a quiet indoor ring, and I spend the cold months in my own personal horse-oriented dojo remembering that there's more to life than the insanity people make of it. This year we're working on molecular bridging – what a concept, huh!!!

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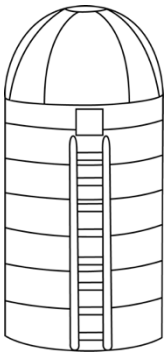
Unexpected Paths

As I set out to write the newsletter this spring, I was coming off of a winter caught up in the study of two totally different topics – or so I thought. One was a wide-angle-lens look at soil, carbon, water, climate change and landscape stability and resilience. The other was an unexpected and fairly intense look into local town governmental structures (did you know Massachusetts has a 250 page Handbook for Selectmen? – me neither - but I do now), where we come from and where we're going as it affects our ability to govern ourselves. Quite the range, huh?? What was even stranger is how the two topics started to blend at their bases into a single issue at least in my somewhat weird brain….

So – a bit of a head's up – this isn't quite my normal look at landscape gardening newsletter, but I hope you still find it interesting.

Have you ever heard of the word silo?? In agricultural terms, of course, it's the straight sided, tall and isolated storage container for grains, beans and other dry storage crops. Somehow, that original definition is very apt for how our modern culture has organized itself…those dry, straight sided, isolated stored nuggets of "knowledge" are fundamental to how we currently function. It seems to me that a core issue that underlies both the carbon issue and the local government issue is the incredible human ability to establish silos, tribes, cliques, specialties, whatever word you want to use, and ignore anything or anyone not already inside that structure.



All of them speak to a narrowing of focus, perception and knowledge to a smaller arena that perhaps we feel we can control or command. Social media has massively intensified this ability/ proclivity and our complex lives of multiple jobs and overbooked time have cemented the fractures. I bring this up because both of the winter areas of study point out the fallacy of this way of thinking/acting.

Granted, many people probably are too overextended to do more than survive day to day, but is that true of everyone? For you? For me? Is there a chance we can get out of our silos? Is there a chance we can break out of our pattern?

Now you might be wondering how I'm connecting gardening and land management to local government. It's easy. Both are built on a capacity to observe and then act. That's the underlying theme I found when I thought about this long enough. It's that personal act of mental expansion that's needed to move either activity forward. I'm choosing to focus on changing patterns that can be made locally and that I can participate in – the friends and gardens I work with, teaching, town government (the Agricultural Commission in my case), farm improvement, new projects, saying no occasionally. The old "Think globally but act locally" has never been more necessary. Unless you join the Peace Corp or otherwise make a HUGE personal life change, you're not likely to affect the global (or even national) scene very much, but work done closer to home can build and build and build (good or bad, so let's go for good!). We could change the world that way…

Foraging Ideas. Cultivating Change

Change does seem to be *the* word for 2019. It's in the air. It's in and on our minds…and even in our actions. Chelsea Green Publishing's winter promo piece has "Foraging Ideas. Cultivating Change." on the cover. Everyone knows that change is not humanity's best suit. I don't know of many people who accept it with open arms. I try to at least keep an open mind but… Change is coming whether we like it or not!

Do you remember a Kaleidoscope from childhood? It's a long tube that twists to create a variety of changing patterns or scenes. Twist the top (or your own perception!) and see a different pattern. This is one of my favorite metaphors…I'm always twisting – in more ways than one. ☺ This is one way to welcome change…

Let's start with a change you can easily make – Delay your spring clean-up until the red maples (Acer rubrum) bloom – and this is AFTER leaving parts of your gardens "wild" for the winter. This allows all of the overwintering bees and other

good guy bugs to emerge and move into the trees (and out of your way!) to get their first food of the season. It might be worth it to leave the clean-up for a couple more weeks to let the larger ecosystem come on line (and that may mean that you have to control your own impulses to clean up!!!! – you're not being lazy – you're being kind!) Even this simple change can make a huge difference to the survival of the local bees and beneficial insects. And why is this important???

Not A Good Sign

In October 2017 a group of European researchers found that insect abundance (as measured by biomass) had declined by more than 75 percent within 63 protected areas in Germany over the course of just 27 years. A year later, two researchers published a paper in the *Proceedings of the National Academy of Sciences* suggesting that within a relatively pristine rainforest in Puerto Rico, the biomass of insects and other arthropods like spiders had fallen between 10- and 60-fold since the 1970s. This doesn't sound dramatic and most people think that this is a good thing since insects tend to creep us out, but it isn't. It's awful…and here's why. We all know that most of our food crops (that are not grains) are bee pollinated. OK – but it's much more critical than that. Insects are critical as a first stage break down of organic material – think of the TV show CSI and how they use the size of fly maggot larvae to determine how long a body has been dead – or don't think about it, but know that it's a critical part of the ecosystem recycling itself. Think of dead bodies of all kinds building up. then there's the fact that huge numbers of birds feed on insects – and those species will die off if there's no food. You get the drift – there's that old school concept of the food web – and we're part of it even if we're at the top. If the whole base falls????

Which brings me to another cool tidbit…

A closer look at a truly unique member of our local woods and edges – the opossum.

'Possums are an unexpected friend in your yard. I know - they freak you out. They look so WRONG with that naked tail and weird behavior. But, for a little nocturnal creature that looks funny and whose lineage goes back to the dinosaurs, it has an amazing capacity for eating ticks. Last year we relocated a possum from the barn up to the woods and a perfect hollow trunk behind the greenhouse. We knew the 'possum made the transition because we saw it afterwards. We didn't really realize it until later, but the number of ticks on Jasper (our dog) started to go down, without medication.

Over the winter, while exploring other topics, I came across the fact that according to a study published in the Proceedings of the Royal Society, opossums kill around 90 percent of the ticks that attempt to attach and a study conducted by the Cary Institute of Ecosystem Studies, researchers estimated opossums can kill about 5,000 ticks in one season. Who knew? Saving the little guy from the barn gave us tick free end of season. It will be interesting to see how tick free we are this year. So far – no ticks…and the ticks should have emerged ready to eat…just not us or Jasper, thanks to our 'possum…

A thought...a living being (human, plant or animal) is fundamentally a self- healing system. Think about it, if this wasn't true, we wouldn't be here. Life has been wandering around on the planet for millennia…it's only recently that we thought we had to control every little thing…

Expanding the concept of craft

Gardening is an art as much as a set of learned skills. This means that gardening can be expanded and elevated to whatever level we want it to be. Everyone has to start with the basics, often repeating the patterns and knowledge of the person who taught us our skills at the beginning, but everyone who's interested in expanding their capacity moves beyond this basic stage. There's an old model of apprentice, journeyman and master. These are the different levels of learning a craft and speak to that expansion of capacity to the extent that it can become an art as well as a skill set.

Not everyone will move through the three stages, of course, and basic skills still get a lot of gardening done! The cool thing though is that there is even a possibility of reaching for a deeper knowledge level that uses all six of your senses (anyone know what the sixth sense is? and it's the most critical in many ways… It's your kinesthetic sense – your body/environment awareness). It would be great if more people could take the time to at least see if that deeper awareness could have an appeal. This is part of my hypothesis that clear observation and a capacity to act are critical and essential to quality land management.

The art of gardening, of working *with,* and not against as is so often the case, the living systems that surround us, can be a lot of work, it can definitely be tedious (or at least be quickly perceived as tedious – could also be meditative!) and can even hurt (all those spring aches as the body gets going again after winter) but, at the end of the day, I can't imagine doing anything else. I love the art, the craft, the theory and the practice, the science and the energy of working with plants and animals – the focus, the discipline and balance of it – the essential work of engaging the energy of each situation (including the people, animals, plants and soils) and bringing it in to focus. Often, I can't go as far as I'd like due to all kinds of restrictions, but a small positive change beats no change at all at least in my world ☺

Give this a thought: for gardening to become something other than cosmetic patches around the corners of your house, there has to be an element of respect for the natural system that your garden springs from. This doesn't mean that you can't act in the landscape, but it does ask you to THINK before acting.

It's the difference between following a recipe or using your knowledge and experience of your yard to make good decisions. I grant you that recipes are easy (give each tomato plant 5 gallons of water per week with 5 tbl of Miracle-gro added every other week – how easy!! – if it were only true…). I've even added a "recipe" of sorts in this newsletter, but I know its weaknesses. This same approach is used by generalized garden and farm recommendations for fertilizer etc. and they, too, only sort of kind of work – and rarely work if there's real weather challenges because almost none of the recipes highlight the true biology of the system they're designed to act with.

We're trained from early school days that there is one right way to do anything (answer a test question, bake a cake, grow a marigold, raise a child – "the best way" – whatever that means at only this moment in time) and that's just not true. It's a mental construct derived largely from mechanization/industrialization and the mind-set that developed following WWII. Think I'm kidding?? There's lots to read on just that if you're curious. For some reason my minor in college was philosophy and it's there I was introduced to Lewis Mumford…who knew that information would show up in landscaping??

Our human world is a complex, LOUD and whacked out space and the natural world is an outstanding antidote. But because of that wacked out human world, the natural world needs our skilled work desperately. It is under the same stress that we are but it doesn't have the same capacity to CHOOSE how it responds. Be part of the solution!!!

One last generalized thought before we continue…absolutely ALL life on earth – you, me, the birds and the bees (and everything else) is based on carbon – and a plant's ability to pull that carbon out of the air, bind it with hydrogen and oxygen and build sugars, that become starches, proteins, fats, you, me, more plants, other animals, all food as well as fuel for planes, trains and cars and our ubiquitous plastics. Organic chemistry rules our world and that is the world of carbon. And how does THAT information relate to gardening?? I'm so glad you asked ☺

Moving on to a new gardening term: Your soil carbon sponge

Climate *change* is now <u>the</u> topic of the day – and be glad that none of us live in Nebraska, or California, or Texas – or almost anywhere other than New England. Wild weather swings are most probably going to become the norm. That means, floods,

droughts, wild winds (cyclonic or otherwise). Can your land absorb all of that water and then hold and disperse it slowly? Are your trees (and man-made structures) up to handling the wind?

It's possible to improve your own small piece of the planet to such an extent that it becomes a contributing part to stabilizing your local ecology. And think about this – if you can get your friends and neighbors to help out and stabilize their small part of the globe – even more can be done. You won't be "climate proof" you'll be "climate resilient" though and that's more than enough to go on with. The larger your local area of soil carbon sponge becomes the more moderated your local climate becomes.

There are two parts to that moderation and stability – the soil itself and the plants growing in that soil – and they go hand-in-hand. So far this is not rocket science, not unexpected right? OK – now let's get specific.

Soils are up first (although John Kempf would say that plants should be up first – and he has a good argument for that – look him up; great podcasts). And here's another name that you might like want to look into… Walter Jehne (an Australian climate scientist as well as soil microbiologist). I got a chance to listen to Walter last year. His contribution is a focus on the soil carbon sponge (SCS). Never heard of the SCS you say? Well, no surprise there! Here's a definition: "The soil carbon sponge (SCS) is a porous, well-aggregated soil rich in plant roots, diverse life forms, nutrient availability, air, and with the capacity to hold lots of water." Peter Donovan. It's an analysis of the best soil system where water and carbon are intrinsically linked through soil biology and it's that linkage that creates the soil carbon sponge.

Think of a SCS this way - the condition of the soil surface, and what's growing on it, controls the land's response to the pressure of rainfall. The quality of the soil underneath that surface controls the penetration of rainfall into the soil system itself. This makes a lot of sense if you take a step back. That's why there are forests around all of our reservoirs – to help water move cleanly and smoothly into the ground and then move steadily down to water that we then draw on for our urban supplies.

Here's a strong visual that Didi Pershouse (https://www.didipershouse.com/understanding-soil-health-and-watershed-function.html, page 9) came up with: Take a cup of dry flour on one plate (with a rim!) and a piece of bread on another plate. Grab a Dixie cup and punch about 10 holes in the bottom of it – you're imitating rain. Measure out two cups of water in two containers and, holding the cup over either the flour or the bread, pour in the water from one measured unit and watch what happens. The flour will allow almost all of the water to run off (there's your flash flood and erosion -watch the sides). The bread will absorb most if not all of the water and any excess will ooze *gently* out of the bottom of the bread. The only difference between those two visuals is the action of the yeast and correct action (in this case kneading – in the plant world roots) on the flour (soil elements) to create a structured product we call bread (and that is analogous to the microbe created soil carbon sponge). Got to LOVE the ability of microbes to do a job, huh??? (there's also beer and wine – just to broaden the joyful awareness of microbes…)


If you think about it, our man-made world is hard, dry, impenetrable (and we kind of like it that way – no mud!!!). We hard-surface as much as we can, concentrating the force of water, creating massive heat islands, and "making our lives easier"… but… those first two statements carry an enormous cost with them. Think about flash floods that are now the norm. Concentrated water has a massive force component attached to it and strains ALL systems when the water can't be quickly pulled down and into the soil system. And that heat island??? Physics 101 tells all of us that hot air rises and cold air sinks – the basics of weather patterns of course.

But what does that mean in real time? Every time we establish a heat island, that rising air (high pressure zone) pushes away cooler, moister air (low pressure zone). You've heard of blocking high pressure? That's when a high-pressure zone becomes so strong with rising heat that it diverts low pressure around itself (instead of being moved along in a normal pattern) and drought develops underneath that high and flooding often forms on the outside edges. You remember when Hurricane Harvey stalled? That's when the low-pressure system weakened so that it couldn't move – it had to wait to be picked up by upper atmosphere winds – so it dropped all of its water…

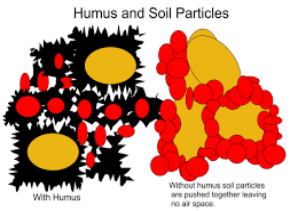
What does this mean to you – the property owner?? Well – if all of the rain that falls on your property can penetrate easily and then be stabilized for future use, wouldn't that take the pressure off of both flood and drought? Your yard wouldn't wash away in a flood, you'd need to use less water to maintain your gardens and lawn and you'd get maximum value from any irrigation that you did decide to use. Prove this for yourself. Take a five gallon pail of water and dump it onto your lawn. How far does it have to spread before it starts to sink in? If it keeps moving until it's a thin skin then a hard rain is going to create wash and erosion and you, most likely, have an element of heat island inherent in the soil's inability to absorb water.

Here's another visual – take a tuna can and make it a tube by removing both ends. Place the tin on the ground firmly so that water can't ooze out the sides and fill it up with water. A tuna can is about 1" high and many of our strong storms now are dropping ¾"-2.5" of rain at a time. What happens to the water you pour in? Does the water hang out? go down fast? go down slow? Just knowing that kind of information can help you make decisions. You should run this test everywhere you manage – your gardens, your shrub borders, lawns etc.

Most of you will either have a fast draining system (built on builder's sand/gravel essentially with a skin of loam) or it won't drain much at all (due to compaction and clay-based loams). Neither answer has a viable soil carbon sponge. But you can build one…and you should!

Building a soil carbon sponge is based on managing the carbon levels in your soil and enhancing the quality of photosynthesis in your plants so that they can pump more and more sugars (trapped carbon) into their root zones supporting more and more bacteria and fungi – especially the Glomus sp. of fungi (but all members of the soil food web play a role).

The Glomus fungi will take the plant's sugars and create these wickedly cool long and complex glycoprotein molecules loaded with carbon atoms (and who knew that was something to crow about!!! But it is….) called glomalin. Glomalin can roughly be considered soil glue. It's sloughed off of the Glomus fungi as the hyphae grow and die and it combines with soil particles to create that wonderful soil term called "friable" soil. Water and air can move in and out easily, plant roots can move easily, minerals are held in available molecules for plant use and a soil carbon sponge is born. Other animals like worms are essential in helping with this process and the entire soil food web would take a book to outline.



Did you notice that this sponge building started with growing plants to promote maximum photosynthesis? I cover this almost every year. It's that important!! You can also check out all the past newsletters on line at greeneryinmotion.com. Remember, every time you've produced a healthy and vigorous plant of any kind (and that includes the weeds!) that's growing in the soil of your yard, you're adding to your soil carbon sponge.

Soil Is the Greatest Gut on Earth

This next tidbit is from "Does Dirt Make You Happy" by Anna Brones in the Modern Farmer. "Did you know that there's a natural antidepressant in soil? It's true. Mycobacterium vaccae is the substance under study, and it's been found to mirror the effect on neurons that drugs like Prozac provide. The bacterium is found in soil and may stimulate serotonin production, which makes you relaxed and happier. Studies were conducted on cancer patients, and they reported a better quality of life and less stress. Lack of serotonin has been linked to depression, anxiety, obsessive compulsive disorder and bipolar problems. The bacterium appears to be

a natural antidepressant in soil and has no adverse health effects. These antidepressant microbes in soil may be as easy to use as just playing in the dirt.

Most avid gardeners will tell you that their landscape is their "happy place" and the actual physical act of gardening is a stress reducer and mood lifter. The fact that there is some science behind it adds additional credibility to these garden addicts' claims. The presence of a soil bacteria antidepressant is not a surprise to many of us who have experienced the phenomenon ourselves. Backing it up with science is fascinating, but not shocking, to the happy gardener. Mycobacterium antidepressant microbes in soil are also being investigated for improving cognitive function, Crohn's disease and even rheumatoid arthritis. Antidepressant microbes in soil cause cytokine levels to rise, which results in the production of higher levels of serotonin." A long quote but extremely worth being aware of…

Healthy soil is not only imperative for our food security and personal health, it is also foundational for our cultural and emotional well-being. I can tell you from personal experience that horticultural therapy WORKS and getting people to get their hands in healthy soil can "wake" them up. I can heal snarky cuts on my hands by working barehanded in some of my soils.

This is true in gardens, in fields and in forests. There's even more wild work being done on tree soil systems. Check out the Smithsonian's "Do Trees Talk to Each Other?" by Richard Grant for an in-depth look but here's the quick take home. When we look at a handful of woodland soil and we see the fungal hyphae – those hyphae are part of the mycelium web that weaves through-out the forest floor moving sugars and other molecular messages between the trees. What a weird feeling – think about that next time you walk through the woods! Fungi really are the key to carbon and mineral stabilization and sequestration as well as communication. The fungal hyphae take up to 40% of the sugars produced by the trees and share that carbon through the forest floor networks, trading for minerals and other necessities. Pretty cool!!!

The wonder of plants…

I have to say that every year as I work with plants (of all kinds), I value them more and more. Enough so that I'm trying a bunch of new fruiting shrubs that can be maintained, with care, in containers so that everyone can get the chance to taste really fresh, unpolluted fruit. All of these plants can also go in the ground (and, in fact, the blueberries on the list are the same varieties that we planted here on the farm), but all will adapt surprisingly well to containers. I've even added a couple of figs. One – the Chicago fig – is hardy to zone 5, but would be best protected in a pot. The other is a pot stable variety that would have to come in for the winter but it might be worth it if you like figs – supposedly one of the best eating figs!

Each shrub will be planted in a mixture that has an appropriate nutritional start along with stone dusts and 2-year wood chip worked into the soil mix. The plants are hardy to zone 4 (we're zone 5) but that doesn't mean they don't need some care in the winter. Place them out of the line of direct sun and make sure they're moist going into the winter. Once the roots have frozen solid, bury the pots in some sort of insulating factor. Bagged dry leaves work as do bagged Styrofoam peanuts. Anything to keep the ground frozen for as long as possible. If you know you have a rodent problem then place screening over the drain holes and wrap the same screening up the stem. Next year, work in the right amount of granular fertilizer (like North Country Organics and Azomite, or Holly-tone or some other high-quality organic fertilizer) into the top of the plant and move the plant back out to where you can water and manage it. It's fairly easy to set up irrigation on a series of pots if you put a few on your deck or driveway. If you do put them on your driveway – think about coming up with a buffering element for the heat sink reality of black top – like a mulch bed underneath the pots to hold more water and cool that spot – unless you're growing hot peppers. They crave that HOT environment and will give you the best flavor and performance if allowed to develop in really hot soils.

You'll be able to leave the plants in their starter containers for the first two to three years or perhaps more but after that, they'll need to be shifted up or start the bonsai techniques of root pruning/shoot pruning. But more on that if you need it, just ask!!! Check out the plant list for the new varieties.

Changing gears…

Remember that I mentioned I had done a fairly deep dive on local government? Well, this last piece doesn't actually have anything to do with creating a healthy landscape or providing color and food for you and your personal ecosystem, but it does have a lot to do with changes that can be managed at the local level. I think it's true that (almost) everyone who reads this newsletter is part of a small town and part of New England… That means that this story is as true for you as it is for me.

A New England town functions only if interested residents of said town step up to help with the running of the town. They meet in "town meeting" to structure and fund the town to meet the needs of the town's residents. Many people think that this is just a quaint idea left over from our noble ancestors (well – at least the people who emigrated here from England and the Magna Carta – the Native Americans actually had a precursor to this called the Iroquois Constitution) – those hardy souls who set up the first town meetings in the early colonies.

This form of government doesn't exist much outside of New England. But we've always been a little different… Did you know that Massachusetts is the first place in the world to trial run local town rule through the town meeting process throughout its territory? It is one of history's most fascinating experiments and we're still in the heart of it – and in the heart of its potential change as the 21st century moves forward.

Everyone knows that community organizations are faltering badly due to lack of time and energy from all of us to keep them going. It's always been hard for people to find time beyond the immediate family's needs but that difficulty is reaching epidemic proportions. Volunteerism is a dying (some would say already dead) energy provided by lots of different kinds of people giving of their time and energy to a wide range of activities – in many ways it's the glue that holds a community together.

That "town meeting" governing the town is predicated on the concept that the individual (that's you and me!) can actually have a say in how we're governed. Do you have any idea how RARE this is in the history of the world? Monarchies and dictators have been much more the norm for millennia of history (and are trying to make a comeback – so easy not to have to think…to act...). However – the self-governing concept is also predicated on the expectation that members of the community will be interested enough to volunteer some of their valuable time to keep their community going.

This may sound preachy but I'm not apologizing for that – I do think this is important. I have a hope for this year, that anyone reading this takes the time to figure out one thing they could do to strengthen the community they live in. Everyone can at least take the time to vote – that's the minimum contribution I should think. But there are other ways: check out and/or volunteer for a board, commission or committee at your local town hall (there are lots of options available!!), join (and actively participate in) the Lions, the Historical Society, a women's group, a men's group, an animal registry, PTA, a bowling league, a farmer's market (you get the point!) any kind of interest group where you actually meet other human beings and share some kind of activity. Anyone with kids has kid activities and can volunteer there, but try for a one-time contribution to some event or activity that's not kid related – just for a change of pace…help connect the children to the town that supports their school. So, think long and hard about what a government OF the people, BY the people and FOR the people means to you and do something about it if it matters to you.

One last thought on wider community structures – what about Cooperation and/or Co-Ops?

Another idea that we've all heard about but that seems to be coming around for another chance at life is the concept of cooperation…between soil organisms and the plants they share space with, (that whole soil carbon sponge thing), between the

trees in the forest and their extended allies both above and below ground (definitely check this out if you're bored!), between all kinds of people and their activities - maybe… It's a funny thing – New England isn't really a part of the world where cooperatives have thrived. True, many of us remember things like the Finnish Farmer's Co-op in Fitchburg, but it was the *Finnish* Co-op that all the rest of us participated in. There are dairy cooperatives too, but it's not an idea we turn to unless driven in to it. I think it's because the old Appalachian granite that's the backbone of our soil has sunk deep into the bones of the people in the region. We're strong, but not really…hmmmm… bendable….and the whole concept of co-op is based on a give and take to accomplish shared goals, not just your goals or mine. Still, the times they are a changing and those shared goals may be stronger than our individual goals if we want to create stability around those goals – like local food, local production, local sourcing of all kinds of things (like high quality mineral fertilizers & farm and garden equipment).

Every time we spend money on and in a local business that money circulates around the community several times. Every time we spend money at Walmart or any other large chain store, we send our money out of the region. If you want to experience it, head over to the Berkshires…they work really hard to maintain an internal economy out there on the fringes of our state. Ever been to Pittsfield, MA? You should, there's nothing like it on this side of the Berkshires. Not surprisingly, they don't feel that they're much of a part of our state…if we think Boston makes us into poor stepchildren – think about how Pittsfield feels!! Point is – where you spend your money counts. You vote in a ballot booth, you can vote with your feet and you vote EVERY time you spend ANY money – and that's a lot more often than in a booth or on your feet. So, make your votes the best they can be. And here endeth the sermon…and back to lighter weight topics ☺

Love is but a song we sing
Fear's the way we die

Come on people now, smile on each other
Everybody get together
Try to love one another, right now

If you hear the song I sing
You will understand
You hold the key to love and fear
All in your trembling hand
Just one key unlocks them both
It's there at your command

Lyrics from Get Together by any number of artists although most of us know the Young Bloods version from the '60s the best – still appropriate for our times?? An encapsulation of the current human condition??? Perhaps it's just ongoing… But, it's nice to be hopeful for just a few minutes…

Farm and Garden Tours

This year the farm is going to be open for a couple of farm tour days – The Westminster Historical Society Garden Tour (July 20) and the second annual Rocky's and Rocketta's Farm Tour (August 3). These are the days to visit if you want to see the farm at its best. There will be new baby goats as well as gardens of all kinds including the HK beds that have been in production now for over 10 years. Some of you were here in the fall of 2017 to help build our newest HKs and you can check to see how they're doing.

New This Year at Greenery in Motion

Apprentice days at the farm

Have you been looking for a hands-on chance to learn (or sharpen up!) some basic gardening skills?

I'm introducing three on-farm apprentice days – afternoons this coming season. Hands-on is really the only way to learn some of these skills.

Each workshop is $25 and includes enough materials for you to take home to a 4'x8' bed. These workshops will be held rain or shine unless the weather is truly severe – in that case any registrations will be refunded. Each class needs a minimum of 5 people to run and will be capped at 15 so that everyone gets a chance to have their questions answered. Register on the plant order form or email me at altobelliml260@comcast.net and put apprentice in the subject line.

Maintaining your Garden
June 23, 2019 1:00-3:00pm
You've done everything right to get the plants started well, but this is the time of year where problems start to creep in. You'll get a chance to

use a refractometer to measure the quality of the leaves as well as use your other senses to "read" what the plants are telling you. You'll also be able to take home either a granular or liquid plant support depending on what your main problems are.

The Late Summer Pause
August 25, 2019 1:00-3:00pm
It's time to start the assessment of the growing season and look to what work can be done in the long and warm fall. We'll look at dividing perennials and underplanting cover crops. You'll be able to take home some cover crop seed or a division from one of the farm's perennials

Putting the Garden to Bed
October 5, 2019 1:00-3:00pm
How to take a soil test, working in minerals, preparing to winter the beds with active biology (mulches, leaving roots, cover crops). You'll be taking home enough microbial stimulant to work with your beds through the long winter (after learning how to mix it!).

And there are always goats and ducks (with a few babies around I'm sure!) to entertain or relax you.

Here are a few things to keep in mind for **July-October to maximize photosynthesis** (and enjoy healthy plants***!). It's a <u>"recipe"</u> though and therefore it needs your observation skills engaged to make sure it's doing what you think it is*** ☺

1. You need water to keep the soil's micro-organisms working for you and the plant. Set up some kind of **drip irrigation** around your plants. It can be drip tape, soaker hoses or other products all designed to get water to the soil and let it seep in slowly. Be careful of overhead watering spreading diseases. If you must you overhead irrigation then time it for dewfall – just before dawn..
2. Mulch everything, all the time. Any exposed soil heats up dramatically and tightens as the top of the soil system microbes dies. This stops easy water movement when rains do come.
3. Use **liquid fertilizer** in the irrigation lines or use a watering can. I use <u>Neptune's Harvest fish hydrolysate and kelp</u> (excellent food source for micro-organisms), <u>molasses</u> (carbohydrate for root zone), <u>a touch of castile soap</u> (makes it easier for water to move through the soil – use a little more if the soil is really dry) and a microbial soil inoculant if the soil is really dry.
    - The recipe looks something like this: 1 tbl fish, 1 tbl molasses, short squirt of castile and ¼ tsp of microbes in a gallon of water. Plan to use this quickly because it is actually a living product and it will exhaust the oxygen in the water. Don't let it sit for more than a couple of hours – and in the shade at that. If lack of water is part of your problem – water first (add liquid soap or yucca to the water) until water has reached 3-4" into the soil. Then add your fertilizer solution to the lines or watering can and continue.
    - And last – <u>but not least</u> – you can use a **foliar spray** on the leaves of the plant. This can be amazingly effective because plants can take up both minerals and sugars through the leaves. This is sort of like using an IV for the plant – fast into the vein so to speak. The trick is to apply the liquid before the dew dries in the morning or after the heat has well left the day – usually after 6pm in the evening. This makes it a great job to do as you walk around your yard at the end of the day ☺.