The Principles of Regenerative Organic Agriculture

1) Consider Your Context

Most importantly; becoming regenerative in your life means knowing the limitations and opportunities available to you in your context. Don't forget to consider the financial (can you afford the equipment needed to execute your plan?), environmental, cultural, social and spiritual (does it fit your values) aspects of what you're planning to do. Remember to start small with what you have and don't be afraid to share your journey with others. We all benefit from hearing about the successes and trials of our neighbours and avoiding the mishaps they've already learnt from!

2) Keep the Soil Covered at All Times

With plants either living (crops and cover crops) or dead (mulch). This armours the soil against the harsh heat of the sun (which bakes the soil ecosystem and the life in it), retains moisture (making it available to crops), protects fields from the loss of the most fertile top soils to wind/water erosion and also absorbs the impact of rain (which hits bare ground with amazing force - think of each raindrop as a mini bomb going off, throwing topsoil into the air and compacting the soil below)

3) Keep a Living Root In the Ground as Long as Possible

A living root in the ground holds the soil structure and it also supports a living -photosynthesizing- plant above ground. We all know that green plants take in CO_2 from the air and turn it into sugars (carbohydrates) for use within the plant. What many of us don't realize is that anywhere from Plants and soil life also have a unique relationship. Forty to 60% of these sugars are pumped out into the soil by the plant as root exudates that feed the microbes (fungi, bacteria etc) in the soil. These microbes in turn bring important nutrients to the plant. The root exudates are mainly carbon. This form of carbon, along with the action of the microbes is the primary channel for building carbon in the soil. The more exudates a plant can put out, the bigger and more diverse a community of microbes it can support. As this community grows it can access more and more space in the soil giving it more and more opportunities to seek out, find and retrieve desirable nutrients from the soil – no synthetics required.

4) Minimize Soil Disturbance

Unless you're using it as an intentional tool, soil disturbance should be strategic and integrated with other management approaches. Soil disturbance includes physical disturbance like tilling, discing and other forms of cultivation and chemical disturbance including the use of pesticides and synthetic fertilizers. Disturbance can lead to death of soil microbes (especially fungi) if applied unchecked. However, disturbance is also a powerful tool that, when applied correctly, can be used to stimulate growth, alter community composition (for microbes and weeds) and promote healthy interactions. Don't underestimate the power of disturbance in your system – intentional or otherwise.

5) Diversify

When in doubt; diversify. Adding diversity above ground (i.e. in your crops) creates diversity below ground. A great place to start is by trying your best to add forbs (flowering plants) and grasses and legumes to all of your plantings. This can be done by including species from each functional group in your diverse crop mix (e.g. Planting oats, peas and sunflower together) or by planting the sequentially in your rotation (e.g. a year of peas followed by a year of oats and finally a year of sunflowers). Remember, different plants put out different exudates and therefore attract and feed different soil microbes that do different jobs. Keep above-ground diversity in mind if you want to see diversity below ground.

6) Add Livestock

Whenever you have a chance, include livestock in your fields. We most commonly think of cattle in regenerative systems but diversity will optimize your system here too. Look at sheep, horses, chickens and pigs or any other animal you have access to. When live animals aren't a practical option, consider adding manure and or compost (filled with microbial "livestock" if you will) as a source of both nutrients and organic matter for your soil. Manure and compost not only bring nutrients to your fields but also support soil structure by adding organic matter.

In Conclusion

With these principles in mind, it's now time to sit down and figure out what you hope to accomplish by transitioning to a regenerative organic agriculture system (what are your goals), how you might do this (what is your plan) and how you will do it (what tools are available to you). A great place to start is by adding a cover crop, intercrop or relay crop to your rotation. Make sure to pay special attention to including plant species that will help you achieve your goal. Also, take time to think about how you'll determine whether this venture was a success or failure. Nobody plans to fail but sometimes we all fail to plan. Start out on the right foot by planning to make time to observe, observe, observe! Take note of what you see during the growing season and why this may be happening. For this reason alone, it is strongly recommended to focus your first regenerative efforts on a small piece of land that's easily accessible (like a field you drive by daily). Set yourself up for success by making it easy to do a weekly walk through where you get a real feel for what's going on in your field, what's working and what unexpected benefits you may already be seeing. Don't forget to take notes and take pictures and go back to them at the end of the season as you review your first foray into regenerative organic agriculture.