

# Jimmy Acres: A Tommerdahl Family Farm

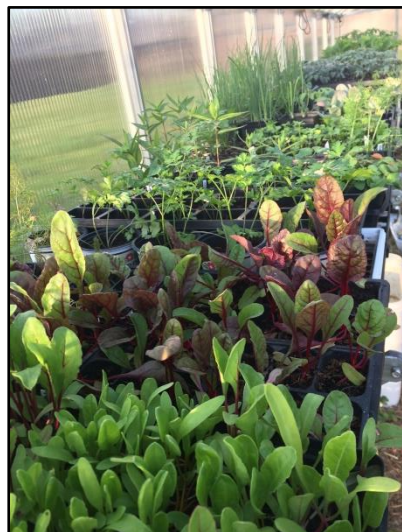
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Hello friends and neighbors!

Spring has sprung! And our garden work has already begun. It's such an exciting time of year when the weather starts to warm up, plants start to grow, and it's time to start getting plants and seeds into the ground. While we had some chilly weather slowing things down a few weeks ago, the garden is starting to come to life and we're hopeful that the rest of our fruit tree blossoms are safe from the danger of frost! Some of the projects we've been working on this month include:

♣ Mushroom logs! We've begun plugging logs with 7 varieties of shitake mushrooms, hopefully giving us a wider range of harvest dates.

♣ Seeds are started and the greenhouse is full of plants! Tomatoes, peppers, eggplants, celery, swiss chard, beets, basil, dill, cilantro, parsley, sweet potatoes, and fennel, to name a few, are loving their new home in the greenhouse (almost as much as Anna!). Want to add some of our plants to your garden this summer?



Ordering instructions will be emailed out next week, or simply shoot us an email to arrange a time to stop by the greenhouse and pick some up!

♣ We've also put a couple hundred new plants in the ground: broccoli, cauliflower, cabbage, collard greens, Chinese cabbage, onions, swiss chard, beets, spinach, kale, lettuce, plus peas, radish, turnip, and rutabaga seeds. Things are finally starting to grow faster, so we hope to be able to have produce available for sale soon!



♣ We've been talking for while about getting a perennial bed started for things like strawberries, asparagus, and rhubarb, and we finally got around to it this month. With the help of Lance's constant supervision, we have a good start to our new section of garden. Lots of mulch and cardboard will hopefully keep weeds suppressed, and we threw out some cover crop seeds to get some roots in the ground and out-compete weeds while we get our plants ready to go in the ground.



In addition to providing you with plants and vegetables, we also like to open your mind to new ideas that we find interesting. This month, we're diving into a topic that we've been thinking about for a while. We hope you find it as exciting as we do!

## *Marine Science and Farming: Saving the Oceans One Vegetable at a Time*

As you may or may not know, the Tommerdahls collectively have a handful of marine science related degrees of various levels (Jake is even an honorary aquanaut!). This month, we've decided to get



your toes wet in the subject of how the topics of farming and oceans are a lot more related than you might initially think. People are usually confused when they hear us say that we *are* using our marine science degrees by farming! How so, you may ask?

To answer that question, let's take a look at the state of our oceans today: there are major problems with pollution, plastics, man-made chemicals of all sorts, increased temperatures, decreased oxygen levels, increased acidity from increased CO<sub>2</sub> levels, and changes in ocean currents that make it hard for marine life to survive. Our oceans need some help, and not only to help out the critters that reside in them, but for our sake too! Oceans play a vital role in regulating our planet's air currents and weather patterns, they provide us with food and nutrients for our survival, and phytoplankton in the oceans produces 70% of the world's oxygen, to name a few of the many unique and important functions. Whether you live a mile from the coast or 1,000 miles from it, your life depends on the oceans!

Taking a step back, many of the problems facing our oceans today can be traced back to agriculture. Animal waste, pesticides, herbicides,



fertilizers, and sediments run off into streams and make their way into the oceans where they contribute to the formation of "dead zones," or areas of very little oxygen. Pollutants act as poisons to critters in the oceans and are magnified up the food chain. Plastics choke birds, turtles, fishes, and marine mammals. Sediments clog up the gills of fishes and filter feeders like oysters and clams and increase turbidity in the water column, blocking sunlight from photosynthesizers and making it harder for animals to see both predators and prey. And one third of global greenhouse gas emissions are due to conventional agriculture, causing both increased ocean temperatures and acidity that are disrupting biological,

chemical, and physical systems at every level. Sadly, the list goes on and on...

As marine scientists, we were frustrated that there was little we could do to reverse what is going on in the oceans. Much of what is done in the field is monitoring changes and studying how those changes effect life in the oceans, but it can be frustrating to simply document the decline of the health of our oceans and the health of the organisms that live in them. Fortunately, we've been learning that there *is* something that can be done! It turns out that changes must be made upstream to prevent the problems from happening in the first place.



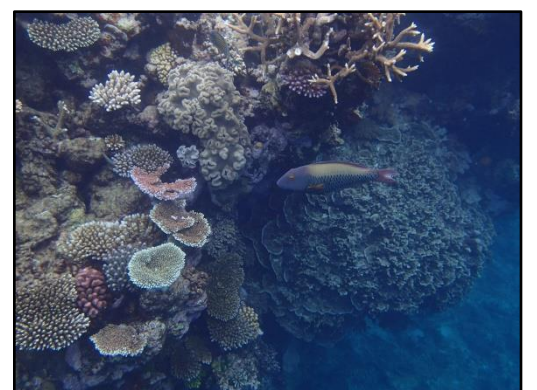
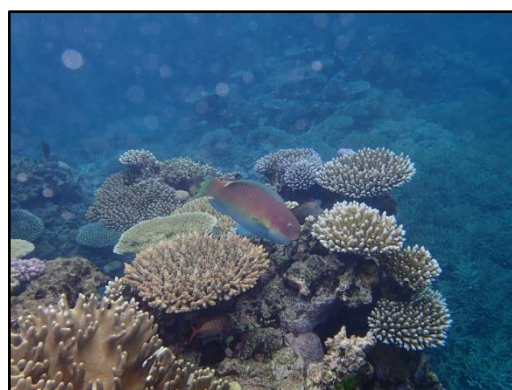
Although most of our agricultural land today is farmed conventionally, that doesn't mean it's the best way to farm--for the health of the land, the health of our oceans, or for the health or economic well-being of the farmer. By looking to biology, ecology, chemistry, and physics, and by working *with* nature instead of against it, farmers can eliminate the need for pesticides, herbicides, fungicides, and chemical fertilizers, keep animal waste on the land to fertilize and enrich the soil, decrease reliance on rain and irrigation, and eliminate sediment runoff from their land by keeping the soil covered with plants



and full of roots. With this approach, plants and animals are happier and healthier, water gets cleaner, farmers keep money in their pocket instead of paying it out to chemical companies, and plants are better able to do what they

were designed to do—take carbon (CO<sub>2</sub>) out of the atmosphere and put it back in the ground via photosynthesis.

That all sounds too good to be true! With all the talk about global climate change and rising atmospheric CO<sub>2</sub> levels, it seems crazy that the answer is literally right under our noses! Plants were designed to work symbiotically with animals and bacteria in the soil to pull carbon out of the atmosphere and store it in the ground. According to Dr. Rattan Lal, an Ohio



***If you have any suggestions for things you'd like to see at the farm stand this year, or have other ideas for how we can improve our customer service or your produce-buying and -consuming experience, please let us know! And as always, please feel free to pass this along to all of your produce-loving friends and neighbors!***

State soil scientist, "A mere 2% increase in the carbon content of the planet's soils could offset 100% of all greenhouse gas emissions going into the atmosphere." Considering that conventionally farmed soil has lost 50-70% of its original carbon content (with estimated pre-farming soil organic matter levels ~6-10%) over the past 100 years of farming, a 2% increase in soil organic matter of our world's farmlands is not an unrealistic goal—in fact, that should be the bare minimum to shoot for! And not only for the sake of carbon sequestration—when organic matter increases to 6-10%, the soil is able to hold more water (mitigating the effects of drought, increasingly unpredictable weather patterns, and our decreasing water supply for irrigation), and the plants are better able to reach their full genetic potential, their nutrient levels are higher, and crop yields are higher, meaning more economic stability for the farmer!



So can we really save our oceans, save our atmosphere, and feed people, all at the same time? We believe that we can, and that's why we're so passionate about our goals for the farm. However, we realize that our 133 acre farm is not big enough to make a dent in these global issues, and that's why education is one of our goals. Whether or not you buy produce from us, we hope that you will begin to think about where your food comes from and realize the impact that farming has on our global community. Was your food shipped around the world? Was it grown using massive amounts of fertilizers and pesticides, much of which ran off into the ocean? Was it grown on land that was tilled extensively, causing erosion and decrease in soil organic matter? Was it packaged in plastics or other material that might end up in the ocean? Or was it grown locally, using minimal synthetic chemicals, with minimal or no tillage, by farmers who are dedicated to storing carbon in the soil while improving the quality of our food supply?

Our background in the marine realm has taught us that everything is connected at every level, and individual pieces of a puzzle don't do you much good in isolation from all the other pieces. Farming and agriculture have the unique property that they directly affect *everyone* on the planet—everybody eats! While agriculture can often seem as an environmental adversary in this day and age, with a little bit of consideration for our soil life and aquatic neighbors downstream, farming can actually revitalize our health, our communities, our landscapes, and, of course, our oceans too!

**"Unless someone like you cares a whole awful lot, nothing is going to get better. It's not."**

**-The Lorax**

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