

# BioDome Curriculum Design

After building and testing the BioDome at Mezzacello Urban Farm I needed to know how difficult it was to build a real model!

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## The Rule of Sustainability – 3 and 5 Strategy

Sustainability is an important topic right now. We need more of it, and better metrics to define what “it” is.

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## Spring 2021 at Mezzacello

Well it's nearly Easter in this year after COVID19. My enclosed sustainable ecosystem is readying itself to come back to life. I decided this cold sunny day was the perfect day to record Mezzacello.

This is right before it goes through it's next big expansion. So here is a little slideshow from April 1, 2021. Let me know if you have any questions. There is some bit of trivia or an active experiment going on in everyone of these photos.

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# Don't Look a Gift Horse in the Mouth

## *Diversity*

Diversity in an ecosystem is always a good thing. I produce high quality compost and fertilizers from various sources. But the poultry and rabbit manure have limits. And it takes time and energy to synthesize them to where the garden beds actually need those minerals and soluble nitrogen. What I need is manure from a larger herbivore with a more selective diet. Cows are OK but their manure is hit or miss and cows eat anything. Seeds can remain intact. No, what I need is horse manure. And I found some! Thanks to Facebook, Columbus Area Homesteaders group, and Abigail Santorine and her lovely little pony, Ginger. My niece and I ran over to Abigail's house and collected manure on a Monday night after work.

## Community

I rarely mention this side of being an urban farmer. It takes a village to become a knowledgeable urban farmer and it takes a village to get all the resources one will need to get an enclosed ecosystem sustainable. It takes work and community.

I am from Los Angeles. I started "farming" in 2014. I have gotten A LOT of help. And it's from a community that spans the globe and is right in my back yard. The Facebook group "Columbus Area Homesteaders" is a terrific group! Everyone on there is so empathetic and helpful (even me). If you are interested in Urban Farming, definitely check them out! Also, remember, a community is a garden as well. It needs tended, it requires care and attention, and you have to be willing to replace what you take out. Abigail, I want to support your

passionate mission at Tiny Horse. I'll post details in the comments on this post! Thank you!

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## **The Foodist: Big Mom's Pan-Seared Potatoes, Onions, and Kale**

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Rick's mother's 13" cast iron skillet with potatoes, onions, parsley, and kale from Mezzacello.

This is a terrific recipe Potatoes Lyonnaise with a twist for a winter night. Simple, warm, filling, crunchy and tasty. Rick made this Cook's Country-inspired dish in his beloved mother's fabulously seasoned, well-used, and much beloved large cast iron pan.

The recipe is deceptively simple. The ingredients were all locally grown and ready for use either from the root cellar or the freezer.

The trick is in understanding the relationship between heat,

water content and timing. Also, a big shout out to Helen Riley (AKA Big Mom) for the lovely gift of this well seasoned pan!

## **Ingredients:**

- 4 Russet potatoes, peeled and sliced into 1/2' slices
- 1 onion, sliced into strips
- 2 cups of chopped kale (frozen is fine)
- 2 Tbsp diced parsley
- 2 Tbsp oil
- 2Tbsp butter
- 1 tsp caraway seed ground
- Salt and pepper

## **Directions**

1. Prepare the ingredients for adding to the pan.
2. Add oil and butter into the cast iron pan and heat it up.
3. When the pan is hot add the potatoes, spreading them around the pan to sear both sides.
4. Cover the potatoes while they are searing and steaming!
5. Remove potatoes if you must to make sure that all get a decent sear on both sides. Be sure to cover the pan.
6. Keep the potatoes warm, you'll be adding them back in the pan.
7. Add the onions and cook until they just start to sweat.
8. Add the ground caraway seed in the pan.
9. Return all the potatoes to the pan. Allow the potatoes and onions and caraway to cook down together.
10. Add the kale in at the end to a hot skillet. The kale will crisp up quickly.
11. Add salt and pepper to taste.
12. Garnish with the parsley.
13. Serve immediately and enjoy.

Serves 4-6 people

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# Spring 2021 and the Brunerform

An update on the gardens this spring and a candid little confessional and observation on Spring, Beauty, Life, and Fashion.

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## The Vision for the Formal Gardens

Six years ago around this time we started mapping out the “rooms” of the formal gardens. We cut out the sod and recycled as much of the dirt as we could and turned the rest into sod rolls for our neighbors. We had 60 rolls of sod. Then I aerated the beds well, and in a few select spots dug the swales which I filled with old wood and dead branches. Then I covered everything over with dirt, compost, weed fabric and mulch. We had nothing to put in the beds. By sheer luck, a neighbor posted on social media they had some boxwoods they wanted to re-home. But we knew we needed something more. So Rick went about making cuttings of the Annabelle hydrangeas we found in the neighborhood. He stuck them right in the ground and let me use my systems to nourish them. This was our first hedgerow.

It's fun to think about those tiny boxwoods – all 36 of them! Rick put them to use to frame the formal garden rooms. They were all donated from a neighbor who had inherited them from

the previous owners of their house – who happen to now live down the street from us. So we made three truckload deliveries and Rick planted every last one of them. It was hard work. They are so much bigger and more vigorous now. The systems for developing compost, the manure, the additives, and the water swales really make a big difference!

*It's funny to see Mezzacello this way. Today the flowers and hedgerows frame everything so well. And the 36 Hornbeams are all almost 4 meters tall now and a solid wall of green.*

I did almost all of the labor here. Rick helps, but it is my job to fertilize and plan systems. This one I cannot take credit for. Rick is the genius behind this plan. I thought he was being over generous in his proportions and scale. I was wrong. This garden has matured beautifully. I can only imagine what our neighbors must have thought of the “racetracks in the grass” that was our yard in 2015. Rick had a vision. And it is today one of my favorite places in the world.

## Update

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# Winter Soldiers in a Garden

Food is complex. The types of food I grow at Mezzacello are optimized mostly for three things:

1. Caloric Benefit
2. Rate of Growth and Yield
3. Seasonal Duration

Today's blog post is about 2 and 3. The vast majority of crops

that I grow are root crops or squashes. They grow well in my #ProjectMartian beds and they can last three seasons with proper precautions. Then there are the “super crops” or “winter soldiers” like chard, kale, leeks, and green onions. Root crops sweeten, but don’t continue photosynthesis like green onions, leeks chard and kale do. They may not be strong on the first optimization strategy, but they are great for flavor and reliability.

The other intriguing component of leeks and green onions: they are essentially immortal. The leeks and green onions you see in this garden in 2020 I planted from either seed or cutting in spring of 2017. If you mound dirt (or compost around leeks and green onions, they will root well. Then when you harvest them, leave the cut root in the ground and a new plant will replace it. Three generations of green onions in 2020 alone. And the leeks were bought at a NC garden stand on highway 12. I kept the bottoms moist in paper towels and brought them home. They lived in a five gallon bucket of water all winter of 2019 (I wanted to move them and replant them and forgot) and yet they persist. These are my winter soldiers!

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## **Jim and Rick and the Beanstalk**

Here at Mezzacello one of the greatest gifts besides the food, the joy, the work, and the peace, is getting to watch life survive and thrive for its own merit. We forget in a mass produced world that life is in fact a miracle. I do not discount miracles. It’s a big word and a strong word and loaded with culture subtext, but sometimes life is about little miracles.



Case in point when I was burning down weeds and dying plants at the end of #ProjectMartian. I had some extra green bean vines (ironically named “Kentucky Wonder”), so I threw those in the Brazier as well. Beans being what they are – vines – dropped six of their beans outside of the Brazier. They did not want to perish, nor did they want to become potash for the rest of the plants here at Mezzacello. They wanted to be green beans. So these are my magic beans. It may seem silly or frivolous, but I’m going to plant them in the spring. Who knows? Maybe there will be a great big beanstalk that grows up into the clouds and I will find a goose that lays golden eggs?

Probably not, because science rules here and there’s not enough biomass to grow something that large, I don’t have a permit to grow something that tall, I could never get enough power for the lighting system it would require, I am afraid of heights, I know my farm is an airport flight path and I KNOW what is in the clouds and in lower Earth orbit. But a boy can dream! And that is one of the other miracles of life; we dream. Dream on people it’s good for the soul.

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## The Harvest Relay

Once again we are up against the gun at harvest time. After the disaster of last year, I am hoping for better systems and better results.