

## Creating a Beautiful Sustainable You Pick in a Food Desert

### Project Goals



My goal is to raise blueberries sustainably on 1/2 acre of pastureland on our beautiful piece of land in the city of Kansas City, Ks. We are one year into this project.

The soil is heavy loess clay on top of a hill. I amended the soil significantly and used biochar on 1/4 acre along with our usual sustainable practice using mulch and organic amendments. On the other 1/4 acre we used the same practice minus the biochar. Biochar can store moisture and nutrients in the soil. Properly produced biochar provides a good environment for essential microorganisms to grow. These microorganisms play a major role in nutrient cycling within the soil environment. Biochar has been proven to have a significant impact when using a holistic approach to sustainable food production.

Many years ago our area was the home of several orchards and many small farms. Today it is a food desert. We hope to bring back orcharding in our area by selling fruit from our trees and bushes and creating a small you pick operation within three years. Presently, our beds are developed, blueberries are planted, protective fencing is installed, blueberries are mulched and irrigation will be installed in April 2018.

### Project Time Line



100 cubic yards of pine bark delivered by semi just off the road 500 feet and downhill from the blueberry beds.

- March 2017
  - Plotted Blueberry Project
  - Plowed and tilled rows
- April 2017
  - Added soil amendments and tilled in:
    - 40% pine bark
    - Rock phosphate, sulfur and green sand
- September 2017
  - Added compost to half of the rows on a grid
  - Washed biochar and added to the rest of the compost – Wet it down and let the biochar charge for two weeks.
- October 2017
  - Added the biochar/compost to the remainder of the rows and tilled in
- November 2017
  - Planted Blueberries
  - 4 inches of ramial mulch
  - Installed electric fence
- March 2018
  - Tilled between rows and broadcast seeded clover
- April 2018
  - Install irrigation
  - Add cottonseed meal and sulfur

### pH Biochar & Blueberries

Biochar has a naturally high pH, the inverse of what is desirable when raising blueberries. Our pH was 6.9 when we started. The biochar we used had a pH of 9. The pH problem was solved by washing the biochar with water. After washing and charging the biochar with compost it becomes a pH stabilizer. At last testing our pH was 5.9. I intend to add cottonseed meal and additional sulfur this spring to bring the pH down a bit more. One-quarter acre is being sustainably grown but without biochar. The other 1/4 acre is being grown using biochar at 3%.

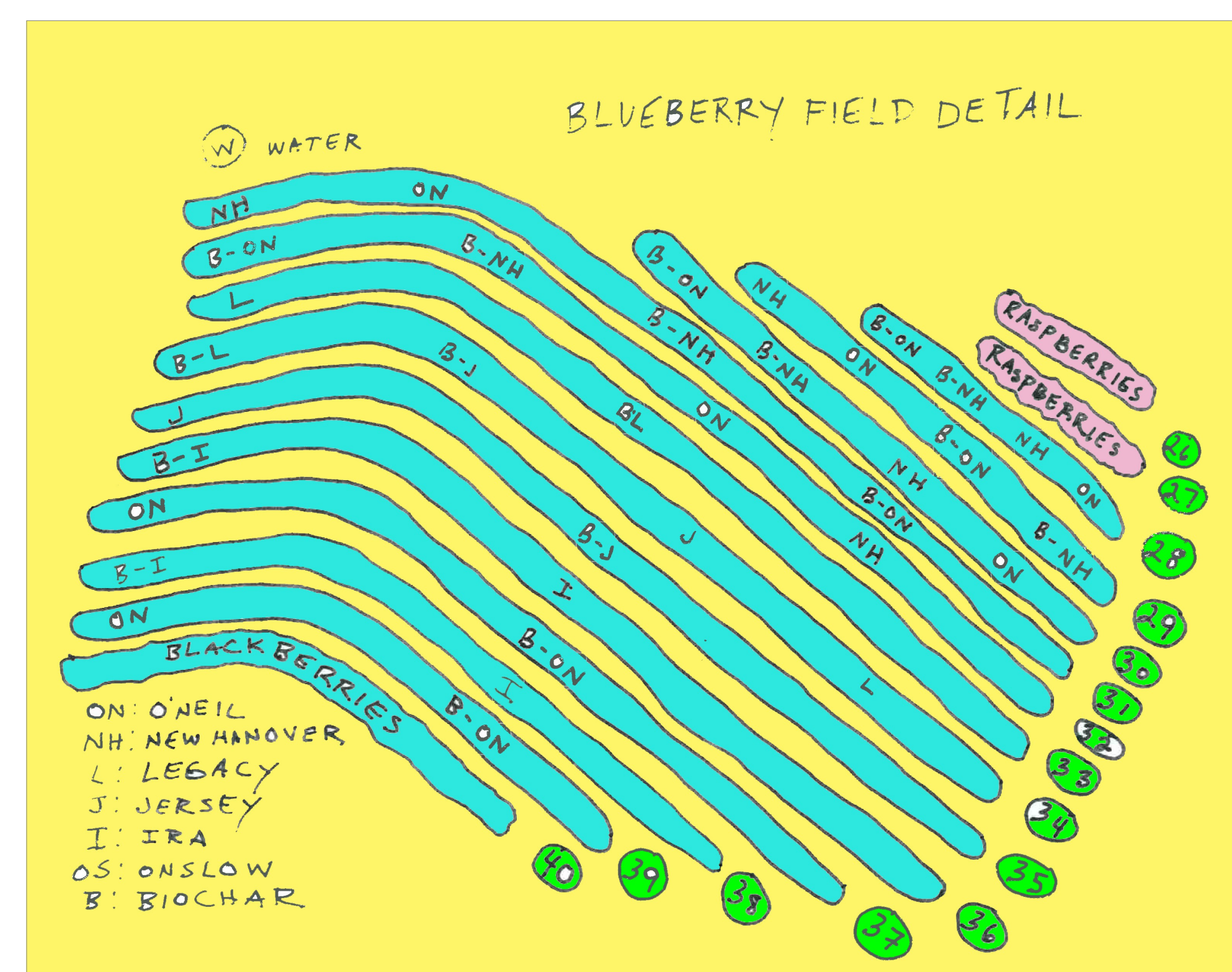


Marty Kraft – Biochar Enthusiast



The drawing is a cartoon map taken from an aerial photo of our farm.

### Blueberry Field Detail



Row	Cultivar	# of plants with biochar	# of plants without biochar	number of feet per row
1	O'Neil	4	3	21
	New Hanover	5	6	33
2	O'Neil	6	7	39
	New Hanover	9	7	48
3	O'Neil	8	8	48
	New Hanover	9	8	51
4	O'Neil	15	16	93
	New Hanover	16	15	93
5	O'Neil	16	15	93
	New Hanover	15	16	93
6	Legacy	23	30	168
7	Legacy	17	16	99
	Jersey	12	18	90
8	Jersey	31	29	180
9	Ira	28	34	180
10	Onslow	25	27	156
11	Ira	20	23	129
12	onslow	20	17	111
Total	number of plants	289	293	1765