When I first started farming I could not have imagined how productive my soil could be. Cover crops have been the key to soil building, disease and weed control.
Growing Harmony Farm is a 74 member CSA diversified farm utilizing just 2 acres total. 1.6 acres in production with a five year rotation.
• Instead of increasing space I have been able to increase fertility and productivity within that space.
• For example when I first started I might harvest 100 lbs of carrots in a 100 foot x 3 foot bed. A couple of years ago I averaged 225 lbs/bed. When conditions are just right it is not unusual for me to harvest 300 lbs in a bed.
Cover cropping:

• One of my best tools for weed control is the use of cover crops. Not only does it compete against weeds it adds a tremendous amount of organic matter and nutrients to the soil.
When a crop comes out of production a cover crop immediately goes in.

- My soil is 2-4% higher in Organic Matter compared to my parents corn and soybean ground. This is due largely to mulching with wheat straw (purchased) leaves (from town) and the cover crops.

- For every % of O. M. in the soil it retains 10,000 gallons of water/acre! In dry years that is crucial to healthy vegetable plants.
I use: buckwheat
• Buckwheat gets established very quick. I will often mix it with winter rye grain and hairy vetch. Just as the buckwheat wants to flower I cut it back and the rye and vetch get established.
Winter rye
• Rye gets established well and competes very well with weeds. It has an aleopathic affect on small weeded weeds. I do not grow rye right before planting of carrots since I need a fine seed bed and do not want seed germination to be inhibited.
Sorghum/sudangrass (don’t let it get this big!)
It should look like this:
• Sorghum/sudangrass is a great cover crop for planting in the heat of the summer (late June/early July)
Also canola mustards
Canola, mustards and sorghum/sudangrass are great tools to minimize damage due to root-knot nematodes.
These are what my carrots are supposed to look like!
Nitrogen fixers

• I plant hairy vetch with my rye and buckwheat
• I also frost seed red clover into my rye where my rotation will be fallow for that year. I keep mowing the rye and by July there usually is a good stand of clover
• This year I will be experimenting with chickling vetch for early spring nitrogen fixing in certain parts of the garden.
Feeding the soil = healthy plants and healthy people