

Organic No-Till Vegetable Garden Techniques

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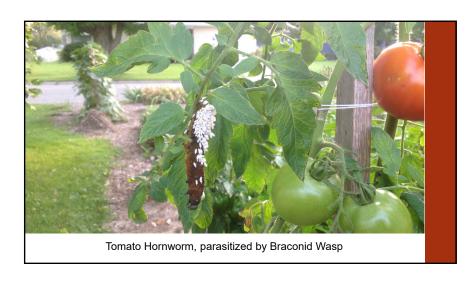
What is Organic?

Legally

Production system managed in accordance with the Organic Foods Production Act and the national organic standards rule of 2000.

Functionally

"Organic agriculture is an ecological production management system that promotes and enhances biodiversity, biological cycles and soil biological activity. It is based on minimal use of off-farm inputs and on management practices that restore, maintain and enhance ecological harmony." — USDA National Organic Standards Board, 1995





Tillage

Pros

- · Incorporates soil cover
 - termination of living plants
- faster decomposition of plant residues
- · soil warming
- · smooth seed bed
- Incorporates soil amendments
- · Can break hard pans

Cons

- Incorporates soil cover
 soil erosion
- · soil crusting Damages soil structure
- Disturbs lifecycles of soil organisms
- · Can lead to run-off & flooding
- · Can create plow pans
- Increases herbicide use in non-organic systems





Organic No-Till Vegetable Garden Techniques

- Permanent Beds & Paths
- Mulch
- Cover Crops
- Bed Prep











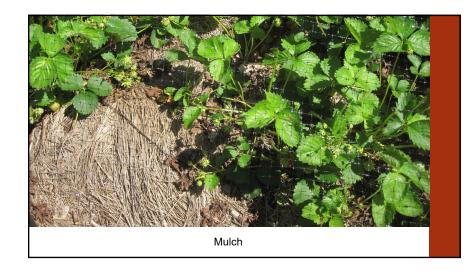


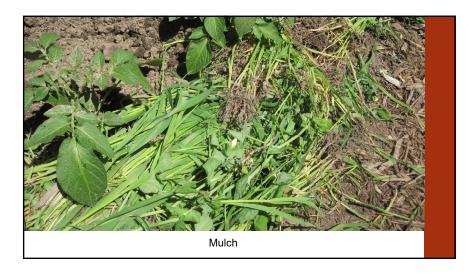
Mulch

- smothers weeds
- conserves moisture

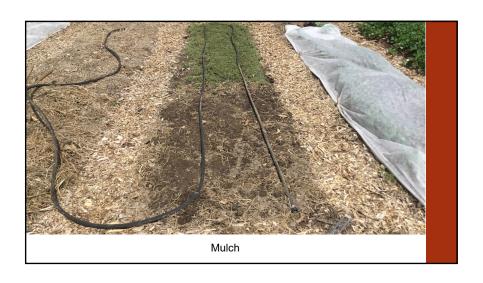
Also

- prevents disease
- improves ease of harvest
- improves harvest quality
- increases fertility (depending on the mulch material)











Cover Crops

- · hold soil in place
- · keep soil covered
- smother weeds
- increase fertility
- · add organic matter
- improve soil structure
- attract beneficial insects
- · increase biodiversity

Important Component of Organic No-Till



Cover Crop Challenges

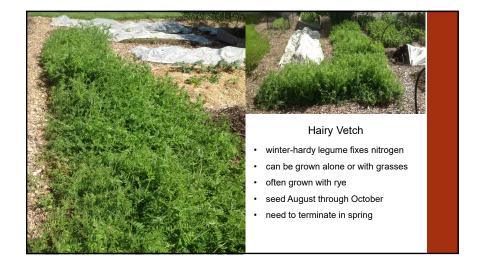
- · sourcing seed
- finding niches in the vegetable planting schedule
- termination

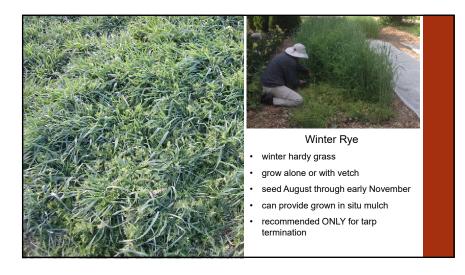


Cover Crops for No-Till

- Oats
- Peas
- · Hairy Vetch
- Winter Rye
- · Dutch White Clover



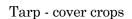












- Plant winter hardy cover crop in the early fall (vetch and/or rye)
- The next year, tarp 1 to 3 weeks before seedlings are ready
- <u>Transplant</u> directly into residue & top up mulch for weed control, if necessary
- Best for warm weather vegetables





Winter Kill

Plant winter sensitive cover crops in the early fall (oats and/or peas)

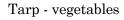
In the spring, <u>Transplant</u> directly into cover crop residue & top up mulch for

weed control

OR pull away residue and <u>Direct Seed</u> into bare soil
 Best for early spring vegetable crops







- Tarp when vegetable crop is done
- Leave tarp in place for 1 to 3 weeks, depending on the crop & weather
- Direct Seed or Transplant into decomposed residue
- Best for tender vegetables that will break down easily





Two Types of Tarps

Woven Landscape Fabric

- · Will let rain through
- · Comes in typical bed widths
- · Cleaner and easier to work with
- · Can take longer to terminate crops
- · Find at Nolts Greenhouse Supply



Silage Tarp (5ml or 6ml)

- Rain puddles on top and can make it stinky and unpleasant to work with
- Comes in large pieces
- Find at FarmTek or Farm Plastic Supply

Both

- · Hold down with rusty 8" sod staples
- · Can be used many times

Pull

- Plant winter sensitive cover crop in the early spring (oats and/or peas)
- Pull cover crop the day of vegetable crop planting
- Move residue to another bed as mulch OR move aside and replace after vegetable planting
- Best for crops that need bare soil (carrots, salad mix, onions, etc.)







