

Organic Vegetable Gardening

Presented by Erica Kempter

Animal Resistant Vegetables (deer, groundhogs, rabbits)

- Nightshade family

- Tomato? (can get nibbled but not usually destroyed by deer)
- Potato
- Peppers (may get eaten)

- Alliums

- Garlic
- Onions
- Shallots
- Leeks
- Chives/garlic chives

- Rhubarb

- Basil?

- Raspberries

- Dandelion

- Horseradish

- Jerusalem artichoke

- Nettle

What Is “Organic”?

- Simple definition: Practice of gardening and farming without the use of synthetic fertilizers and pesticides.
- Working with ecological principles to grow food instead of against them

Organic Soil Amendments, Fertilizers, and Pest Management Materials

- How do you know what is organic (acceptable for use in organic gardening)?
 - Derived from natural sources
 - Non-synthetic
 - Mined minerals
- Rodale books such as *Encyclopedia of Organic Gardening*. Barbara Ellis and Marshall Bradley. Rodale Press 1992.
- See Organic Materials Review Institute (OMRI)
www.omri.org

All Vegetables Need:

- Full sun
- Fertile soil
- Regular water
- Good drainage
- Space to grow
- Minimum competition with weeds
- Protection from animals, pests, disease

All Vegetables Need:

- -> **Full sun**
 - 8 – 10 hours direct sun minimum per day
- Shade **intolerant** vegetables:
 - Corn
 - Basil
 - Peppers
 - Cucumber
 - Melon
 - Squash
 - Watermelon
 - Sweet potato

Shade Tolerant Vegetables (need at least 3-4 hrs direct sun a day)

- Lettuce
- Spinach
- Tomato
- Brassicas (broccoli, kale/collards, kohlrabi)
- Bush beans
- Chard
- Parsnip
- Mustard greens
- Turnips
- Beets
- Parsley
- Rhubarb
- Strawberries

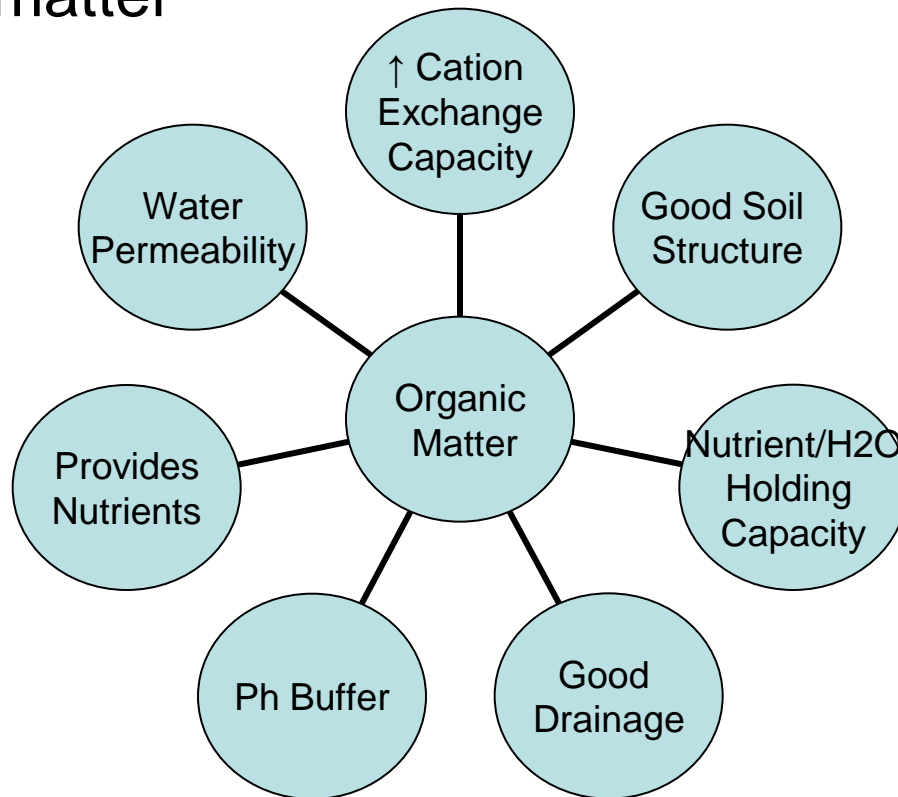
All Vegetables Need:

- Full sun
- **->Fertile soil**
 - vegetables are all highly domesticated so they require more fertility than non-domesticated plants
 - Add compost, decomposed manure
- Regular water
- Good drainage
- Space to grow
- Minimum competition with weeds
- Protection from animals, pests, disease

Organic Soil Management

Goal: Healthy Soil

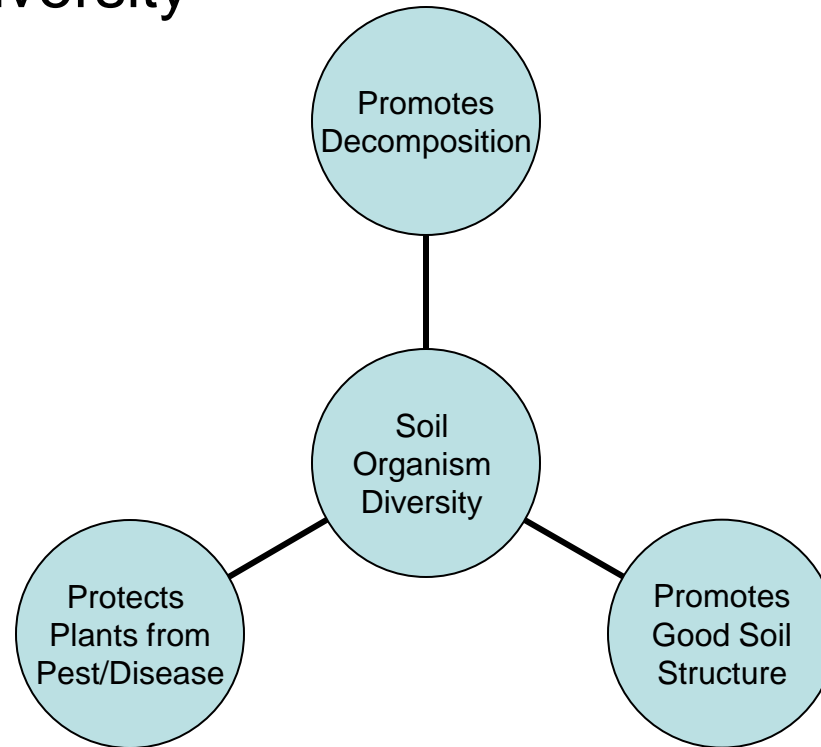
- High organic matter



Organic Soil Management

Goal: Healthy Soil

- High organism diversity



Organic Soil Management

Goal: Healthy Soil

- Good Soil Structure
 - Benefits
 - Soil accepts, holds, and releases water/nutrients
 - Soil provide oxygen to plants

Vegetable Garden Planning

Vegetable Garden Layout

- Permanent beds/paths

All Vegetables Need:

- Full sun
- Fertile soil
- **-> Regular water**
- **-> Good drainage**
- **-> Space to grow**
- **-> Minimum competition with weeds**
- **-> Protection from animals, pests, disease**

Crop rotation

- What is crop rotation?
 - Changing the crop grown on the same piece of ground each year
- Benefits
 - Minimize pest and disease (especially soil born)
 - Rotate plants in the same family 4 years apart
 - Especially cucumber family, alliums, and tomatoes and potatoes
- Aster family (Asteraceae) – lettuce, endive, jerusalem artichoke, sunflower
- Carrot family (Apiaceae) – carrot, parsley, dill, cilantro/coriander, celery, parsnip, fennel
- Cucumber family (Cucurbitaceae) – cucumber, squash, pumpkin, melon, watermelon, cantaloupe, gourd
- Goosefoot family (Chenopodiaceae) – spinach, chard, beets, orache, claytonia, lambs quarters
- Mustard family (Brassicaceae) – broccoli, kale, collards, cabbage, cauliflower, rutabaga, brussels sprouts, radish, mustard, kohlrabi, turnip, horseradish, upland cress, bok-choi
- Nightshade Family (Solanaceae) – tomato, potato, eggplant, pepper, tomatillo, tobacco
- Onion Family (Alliaceae) – garlic, onion, shallots, leek, chives
- Pea family (Fabaceae) – pea, bean, edamame, soy bean, alfalfa
- Rose family (Rosaceae) – strawberry, raspberry, apply, cherry, pear, peach, apricot

Providing For Beneficial Insects

- What are beneficial insects?
 - Insects that eat bad bugs
- How to attract and provide for them
 - Provide food and habitat
 - Native plants are especially good at attracting native good bugs
 - Flowers; plants in the carrot family

Easy Vegetables For Beginners

- Kale/collards
- Misc. root crops (Beet, radish, carrot)
- Tomato
- Eggplant
- Try these:
 - Beans
 - Summer Squash (Zucchini)
 - Potato

Gardening in Small Spaces

- Provide perfect growing conditions so that:
 - Each plant produces as much food as it is capable of
 - Each inch produces as much food as possible
- Plant spacing
 - Far enough apart to prevent competition
 - As close together as possible (see the book “How to Grow More Vegetables” to find out how close plant spacing you can get away with)
- Perfect growing conditions:
 - Fertile soil!
 - Sun and correct plant spacing!
 - Water!
- Use vertical space
 - grow climbing plants on trellises
 - Grow ground cover/shade tolerant vegetables at the base of climbing plants (lettuce, spinach, bush beans, chard, parsnip, turnips, mustard greens, cilantro, dill, strawberries)
 - Plan to prevent shading of lower plants
- Plant compact varieties of large crops

Vegetables for Small Spaces

- Lettuce
- Beans (bush type)
- Beans (pole type – use trellis)
- Kale/collards
- Eggplant
- Garlic
- Onions
- Potatoes
- Tomatoes (trellis or compact/determinate variety)
- Summer squash (bush type)
- Strawberries
- Cilantro

- Turnips
- Radishes
- Carrots
- Beets
- Chard
- Basil
- Broccoli
- Cucumber (trellis)
- Chives/Garlic chives
- Parsnip
- Parsley
- Cilantro

Growing Vegetables Near Walnut Trees

- Plant veggies 50-80' away from walnut trees
 - or plant in pots
- Vegetables highly susceptible to walnut toxin (juglone):
 - tomatoes, potatoes, peppers, and eggplants. (causes reduced growth, wilting, death)
- Vegetables tolerant of walnuts:
 - Corn, beans, onions, beets, and carrots are tolerant of juglone

Companion Planting

- Companion Planting (for pest control)
 - *Carrots Love Tomatoes*. Louise Riotte. Storey Publishing, 1998 (Primarily vegetables)
 - *Roses Love Garlic*. Louise Riotte. Storey Publishing, 1998 (Primarily flowers and herbs)
- Intercropping (dense plantings)
 - *How to Grow More Vegetables*. John Jeavons. Ten Speed Press, 1995.
- Perennial edible plants/perennial polycultures (see next slide)

Perennial Edible Plants

- For more info
 - *Edible Forest Gardens* books by Dave Jacke
 - *Perennial Vegetables*, by Eric Toensmeier
 - Plants for a Future database
<http://www.pfaf.org/index.php>