

## Salad Bowl Garden

GARDENING WITH  
COOL SEASON  
CROPS

## Garden

BASICS

## Location

- Perform a site analysis
  - A detailed study of the existing conditions of the proposed location
    - Soil type
    - Sun exposure
    - Existing trees and shrubs
    - Man made structures
    - Drainage and slope
- Water availability



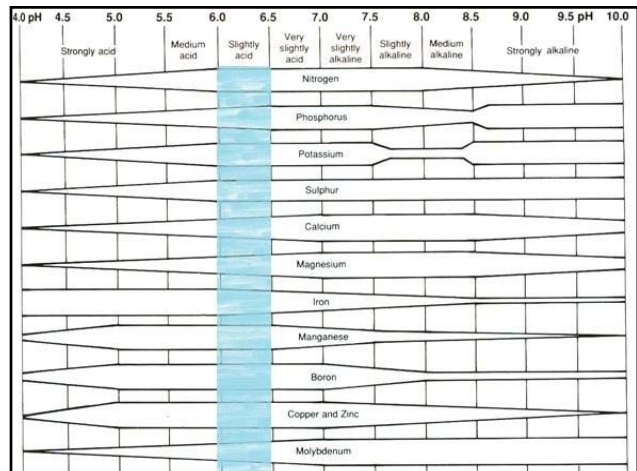
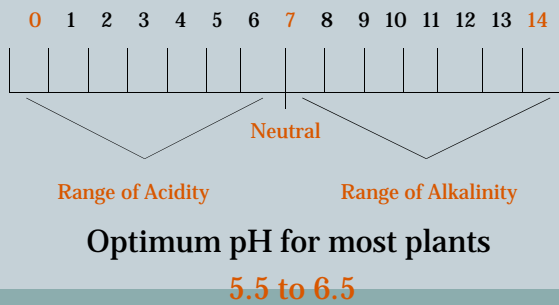
## Organic Matter

- Added with each successive planting
- Compost – your own or mushroom compost
- Manures – Fully composted. Never add fresh manure to the garden.
- Cover crops

## Soil Sample

- Soil sample results give the pH of the soil, nutrient levels in the soil and recommendations
- Best practice have a soil sample done each year.
- Ensure that you are adding fertilizer at correct levels.
- Cost is \$6.00 thru the extension service.

## Soil pH for Garden Soils



## Sampling for Home Lawns and Gardens



Woodley's Garden Center  
Irmo & Northeast

Gardener's Outpost  
Woodrow St.

## Water

- Morning is best
- Water at base of plant
- Established plants need 1 inch a week
- Deep watering less frequently
- Use mulch to conserve soil moisture



## Floating Row Covers

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- Used to extend the season
- Protect plants from temperature extremes
- Variety of different weights available
- Lightest weight provides only a few degrees of frost protection.



UM Extension

Image adapted from <http://extension.umd.edu/growit/photos-cucumber-beetles-spotted-or-striped>

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## Cole Crops

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**BROCCOLI**  
**BRUSSELS SPROUTS**  
**CABBAGE**  
**COLLARDS**  
**CAULIFLOWER**  
**KALE, KOHLRABI**  
**MUSTARD GREENS**  
**RADISH, RUTABAGA & TURNIP**

## Broccoli

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- Heavy feeder, side dress 4 weeks after planting
  - Use calcium nitrate 15.5-0-0/ blood meal 12-0-0
- Temperatures below 21° F can kill plant. Purple buds indicate chilling injury.
- Soil pH is critical for success; pH 6.0 or higher
- Flea beetles can severely damage small seedlings
- Cut the center flower head when it is still dark green and tight

## Brussels Sprouts



## Brussels Sprouts

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- Grown best as transplants
- Heavy feeders, fertilize with Nitrogen every 3-4 weeks throughout the growing season
- Extremely cold tolerant
- Remove the tip to stimulate production of sprouts
- Stake taller varieties



## Cauliflower

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- When the curd is the size of an egg plants need to be blanched
- Purple, green and orange head varieties available
- Insufficient moisture causes bitter taste
- Head must be protected from a hard freeze
- Heavy feeder, needs frequent applications of Nitrogen

## Cabbage

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- Lots of varieties
- Can handle single digit temperatures
- Can get large – give them lots of room
- Regular fertilizer applications produces sweeter, tender plants
- Harvest when the head is solid and firm
- Host plant for checkered white butterflies- Don't grow near butterfly bushes

## Collard Greens and Kale

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- Very cold tolerant
- Easy to establish from seed
- Nitrogen is very important- side dress crop.
- Harvest outer leaves as needed
- Can handle part shade



## Mustard Greens

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- Fast growing
- Can tolerate a light frost
- Pick when leaves are 6 to 10 inches
- Use relay planting for a constant supply

## Arugula

23

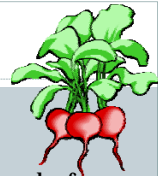
- An aromatic, peppery flavored salad green
- Full sun to part shade
- Requires steady moisture to prevent bolting in warmer weather.
- Hardy to 20°F
- Young leaves tender & mild
- Older leaves spicier
- Main pest- flea beetles



## Radishes

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- Quick growing
- A great companion plant for spinach- lures leaf miners away.
- Cooler temps yield mild flavors
- Sow every 7 to 10 days for continuous supply
- Harvest after 3-4 weeks of growth





## Turnips and Rutabagas

25

- Keep soil evenly moist- apply mulch when plants 5 inches tall.
- To harvest both leaves and roots – take only 3 leaves per plant.
- pH of 6.0 to 6.5 needed
- Do not fertilize as often as other cole crops
- Rutabagas can take 90 days to mature; turnips 35-55 days
- Rutabagas require 1 ½ of water a week for best quality



## Kohlrabi

Has a mild sweet taste

Image adapted from  
<http://redridgefarms.wordpress.com/recipes-2/veggies-e-h/kohlrabi/>

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## Bok Choy

Thick, crisp leaves with a delicate flavor



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## Problems

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- Insects pests: cabbage loopers, cabbage worms and diamondback moth caterpillars and aphids
- Club foot & black rot
- Boron sensitive; deficiency will cause hollow stem
- 1 level tablespoon of borax to 5 quarts of water –treats 50 sq.ft.
- Distorted leaves with brown tips; calcium deficiency
- Bolting
- Bitter taste, small

## Goosefoot Family

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**SPINACH**  
**BEETS**  
**SWISS CHARD**

## Spinach

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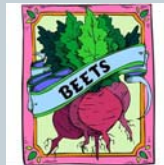


- Thrives with warm days and cool night time temps
- Needs higher soil pH 7 to 7.5
- Hardy to 28 ° F
- Harvest leaves that are 3 to 6 inches long
- Use relay planting techniques to extend harvest
- Soak seeds overnight to aid germination

## Beets

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- Root crop but leaves are also harvested
- Like an alkaline pH (7 to 7.5)
- Even moisture is important!!
- Need to thin after seedlings emerge
- Seeded in August & February
- Need full sun
- Problems:
  - Internal black spot from boron deficiency
  - root knot nematodes



## Parsley Family

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**CARROT**  
**CHERVIL**  
**CELERY**  
**DILL**  
**FLORENCE FENNEL**  
**PARSNIP**



## Carrots

33

- Grow best in a loamy to sandy soil
- Plant seeds shallow & keep soil moist – 3 weeks for germination
- When sowing cover seed with sawdust or potting soil
- White, yellow, crimson and purple skinned varieties available
- Use radishes as a companion plant
- Thin to 1 inch apart when plants are 2 inches tall



## Celery

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- Needs consistent moisture to perform well
- Cold hardy to about 28°F
- Will produce till May
- Fertilize heavily with a complete fertilizer

## Sunflower Family

35

**CARDOON**  
**CHICORY**  
**ENDIVE**  
**ESCAROLE**  
**JERUSALEM ARTICHOKE**  
**LETTUCE**  
**SALSIFY**  
**SUNFLOWER**

## Lettuce

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- Romaine, butterhead and looseleaf varieties grow best
- Can withstand part shade
- Can withstand light frost
- Don't cover seed
- Good results with fish emulsion and seaweed fertilizers
- Use relay planting techniques
- Consistent moisture is needed



## Onion Family

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**CHIVES**  
**GARLIC**  
**LEEKS**  
**ONIONS**  
**SHALLOT**

## Garlic

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- Plant cloves separately September – mid November
- Larger outer cloves have best yield
- Keep soil moist for 4 weeks after planting
- Resume watering with new growth in spring
- When foliage begins to yellow in late spring stop watering
- Harvest when tops die back- Early June



## Onions

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- Plant seed, sets or transplants
- Short day onions are the best for SC
- Best results from seeding in the fall
- Provide even moisture
- Do not use ammonium sulfate ( 21-0-0) to fertilize
- Fertilize close to the plant; limited root system
- A month before harvest start to gradually remove soil exposing 1/3 of the bulb
- Decrease water last two weeks before harvest
- Cure bulbs for 3-5 days before storing



## Pea Family

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**GARDEN PEA**  
**LIMA BEAN**  
**PEANUT**  
**SNAP BEAN**  
**SOUTHERN PEA**

## Garden Peas

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- English pea and edible pod type
- Plant in November – After Thanksgiving
- Do not over fertilize with nitrogen
- Only flowers are affected by light freezes
- Harvest daily

## Lily Family

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### ASPARAGUS

## Asparagus

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- Perennial vegetable
- Male or female plants; males produce better & live longer
- Site that receives 8- 10 hours of sunlight
- Takes three years for production
- Plant crowns about 6-8 inches deep
- Cover with 2 inches of soil as plants grow
- Blanch spears by mounding soil or mulch



## Controlling Insect Pests

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- Neem oil
- Insecticidal soap
- Bt
- Spinosad
- HGIC factsheet:  
<http://www.clemson.edu/extension/hgic/pests/pesticide/hgic2770.html>
- Plant lots of flowers and herbs to encourage beneficial insects.



## Controlling Other Pests



Image adapted from <https://www.pinterest.com/pin/386817053473623696/>

## Questions?

