

# Vegetable Gardening for Beginners

## Review the slides and find links to more information:

<http://pender.ces.ncsu.edu/vegresources/>

## Sign Up for Food Gardener Email News!

To sign up:

- Send an email to [mj2@lists.ncsu.edu](mailto:mj2@lists.ncsu.edu).
- Leave the subject line blank.
- In the body of the message put:  
**subscribe foodgardener**

Find postings of recent gardening articles and announcements on the **Pender Gardener Blog**: <http://pendergardener.blogspot.com> and Pender Extension website: <http://pender.ces.ncsu.edu>

## SIX STEPS TO VEGETABLE SUCCESS!

### 1. Find the right place

- Sun, 6-8 hours
- Well drained soil
- Shelter from strong wind
- Near water source
- Near kitchen!

### 2. Improve Your Soil

- Analyze what you have: sand, clay
- Check drainage:
  - Immediate—too fast
  - Few hours—good
  - Over a day—too slow
- Add Compost
  - Each season, 2"-3" tilled in 6"-8"
  - Grow your own: cover crops
- Determine Soil pH and Nutrient Levels
  - Soil test!
  - Results online:
    - <http://www.ncagr.gov/agronomi/pals/>
- Soil pH

- Under 5.5, acid—add lime based on soil test recommendation
- Till in at least 2 months before planting
- Over 7.0, alkaline—okay for most vegetables up to 7.5. Add sulfur to lower
- Raised Beds
  - At least 8" deep, less than 4' wide
  - Fill with mix of soil and compost
- Containers—fill with potting soil, use slow release fertilizer, water frequently

### 3. Provide Water and Nutrients

- Vegetables need steady supply of both!
- Avoid wetting leaves when water (soaker hoses, drip irrigation)
- In sandy soils in summer, water 2-3 times per week, to moisten top 6"-8"
- Mulch helps conserve moisture
- Fertilizers contain:
  - **Nitrogen**—green leafy growth, most important -most often deficient. Too much reduces blooms.
  - **Phosphorus**—roots and flowers, levels often high, apply only if indicated by soil test, till in
  - **Potassium**—disease and drought tolerance, flavor (tomatoes and melons), often low in sand
- Compost does not supply enough nutrients to meet vegetable needs
- Fertilizers can come from natural or synthetic sources
- Types of fertilizers:
  - **Granular** (10-10-10) - synthetic, release nutrients quickly. Cheaper but have to be reapplied at low rates every 4-6 weeks.
  - **Liquid**—quick boost but no sustained feeding. Good for when first set out. Miracle Gro (synthetic, high N); Compost tea, fish emulsion (organic)

- **Slow Release Fertilizers**—more expensive but worth it!
- Slow release: apply at planting time and again 2-3 months later
- **Time release** (synthetic, e.g. Osmocote) - round pellets, nutrients release over 2-4 months
- Organic (e.g. Plant-tone) - nutrients not readily available in cold weather

#### 4. Manage Insects and Diseases

- Check often—catch early
- Most are specific to certain crops or crop families—i.e. will not attack everything!
- **Chewing insects** (beetles, caterpillars) cause holes in leaves
- **Sucking insects** feed on plant sap (aphids, stink bugs), cause discoloration and distortion
- **Leaf diseases:** Spots, blights, mildews—easier to control. Some varieties resistant.
- **Wilts and root rots:** deadly, plants wilt and die. Cannot be controlled, persist in soil.
- **Nematodes:** cause galls on roots, plants slowly decline. Infect most summer vegetables—look for RKN resistant varieties. French marigold and mustard cover crops can help reduce levels.
- Good practices to reduce pests:
  - Start with good location!
  - Clean up crop debris
  - Prepare soil, water and fertilize appropriately
  - Space plants and avoid wetting leaves
  - Handpick eggs, insects, diseased leaves
  - Use row cover fabric to exclude flying pests
  - Plant flowers to attract beneficial insects (herbs, zinnia, salvia, cone-flowers, Asclepias, yarros)
  - Diversify! Mix crops instead of large blocks. Include flowers and cover crops
  - Soil solarization
  - Crop rotation—do not plant same crop or close relatives in same spot year after year (aim for 3 years)
- **Plant families:**

- **Cabbage Family:** Cabbage, kale, collards, broccoli, cauliflower, radish, turnips, mustard, kohlrabi
- **Squash Family:** Cucumbers, Squash, Zucchini, Winter Squash, Pumpkins, Cantaloupe, Watermelons
- **Tomato Family:** Tomatoes, tomatillos, eggplant, peppers potatoes
- **Bean Family:** Garden peas, peanuts, green beans, lima beans, southern peas
- **Onion Family:** Onions, garlic, leeks,
- **Spinach Family:** spinach, beets, swiss chard
- **No close relatives:** lettuce, corn, sweet potato, okra, carrots (related to parsley, dill, cilantro)
- Even with best practices, diseases and pests will be an issue! Not all can be treated. Identify BEFORE treating!
- Always read and follow label directions when using ANY pesticide.
- **Organic Insecticides:**
  - Neem, pyrethrin control wide range of pests, apply when insects small
  - Insecticidal soap control small, soft bodied insects. Only kill what directly sprayed upon
  - Bt controls caterpillars
  - Spinosad good for caterpillars and potato beetles.
  - NEVER spray bees or open flowers
- **Organic Fungicides**—for leaf diseases
  - Copper, sulfur—use carefully
  - *Bacillus subtilis* (Serenade)
  - Potassium carbonate (Remedy)

#### 5. Know When, What, and How to Plant

- **When:** Cool season crops—plant Aug-Sept for fall crops; Feb-March for spring crops. Warm season crops—plant April-May
- **What:** Seed or transplants; hybrids or heirlooms.
  - Varieties recommended for the South—check Extension publications
  - <http://www.extension.org/search>
- **How:** all at once or successive plantings
  - **All at once:** long lived plants that produce over long period (kale, tomatoes, peppers, melons)

- **Successive:** fast maturing crops (lettuce) or once harvest crops (cabbage)

- **Wait until next year, early spring (February) to plant these:**
  - Garden, sugar snap and snow peas
  - Potatoes

## 6. Easiest Vegetables and Herbs

- **Perennial herbs**—plant once, live for years!
  - Rosemary, sage, oregano, lemon thyme, chives
  - Mint—but keep in a pot!
- **Warm Season Crops**
  - **Basil**
  - **Cucumbers**—downy mildew stops production mid summer (especially pickling types)
  - **Squash and Zucchini**—easy but squash vine borer and squash bugs major pest problems by June
  - **Tomatoes**—cherry tomatoes are easiest! Plant all tomatoes deep.
    - **TOMATO Q&A class:** Poplar Grove Herb Fair, March 23, 11:30 (\$5 admission)
  - **Eggplants and Peppers**
  - **Beans and Southern Peas**
  - **Peanuts**—need excellent drainage
  - **Melons**—need room!
- **Cool Season Crops**—too late for many—warm weather ruins flavor, go to flower quickly (bolt). Can still plant these in next few weeks (and again in fall):
  - Parsely, Cilantro, Dill
  - Radish
  - Turnips and Kohlrabi
  - Leaf lettuce
  - Spinach
  - Swiss chard
- **Wait until fall to plant these easy cool season crops:**
  - Broccoli
  - Cabbage
  - Collards and Kale
  - Garlic (Sept-Oct)

## Pender Extension Master Gardener Plant Sale

- Thursday, April 11, 2pm—6pm
- Friday, April 12, 8:30am—6pm
- Saturday, April 13, 8:30am—Noon
- Pender Extension Office, 801 S. Walker St., Burgaw
- Many plants: vegetables, herbs, blueberry bushes, flowers, shrubs and more!
- Information booth where you can ask questions
- Demonstrations throughout the day on Friday
- **Composting Class**, 10am—Saturday
- Proceeds support Extension outreach programs!

## Ask an Extension Master Gardener

- 2nd Wednesday of each month at Poplar Grove Farmer's Market (April—Oct)
- Hampstead Library—3rd Monday of each month (April—Oct), 10:30—1pm
- Local events: Poplar Grove Herb Fair, Blueberry Festival, Burgaw SpringFest

## Become a Master Gardener Volunteer

- Next training begins February 2014!
- Contact Pender Extension for more details.

## NC Cooperative Extension—Pender County Center

- 801 S. Walker St., Burgaw
- 910-259-1235
- <http://pender.ces.ncsu.edu/> - Use 'Ask an Expert' to post questions online!

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