

Growing Peppers in Pinellas County

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Sprouting Seeds vs. Purchasing Transplants

Sprouting seeds:

- Requires planning ahead
- Requires additional supplies
- Greater variety
- Less disease pressure
- Less expensive





Sprouting Seeds vs. Purchasing Transplants

Purchasing Transplants:

- Convenient
- Good for small gardeners
- Might have underlying disease
- Might have insects
- Inspect transplants carefully



Heirloom vs. Hybrid

Heirloom:

- Save seeds - open pollinated
- More flavorful

Hybrid:

- Usually more fruit
- Stronger
- Consistent
- Seeds not true to parent plant

Starting Seeds

- **Choose container(s) – holes in bottom**
- **Seed starting mix or sterilized garden soil**
- **Sow seed - lightly cover with soil, then sprinkle with water**
- **Keep moist**



Starting Seeds

- **`Damping-off' – fungus - wet the base of young plants with Neem oil**
- **Resetting into larger pots produces vigorous transplants**
- **Move plants outdoors during day (if weather is warm) – not in direct sun**
- **Ready to plant in 4 – 5 weeks after sprouting**

Choosing Transplants

- **Stocky with stout stem**
- **Well formed perfect leaves**
- **Look carefully for insects**
- **Well formed root system – gently remove from pot.**



Planting

- **Best soil pH is 6.3 - 6.9**
 - Need lime if pH below 6.0
 - Need Iron & Manganese if pH is above 6.9
- **Compost can be mixed into transplant hole**
- **Can be killed by frost**
- **Plant after rain, on cloudy day, or late afternoon**
- **Planting dates: Jan.- Mar. or Aug.- Sept.**

Planting

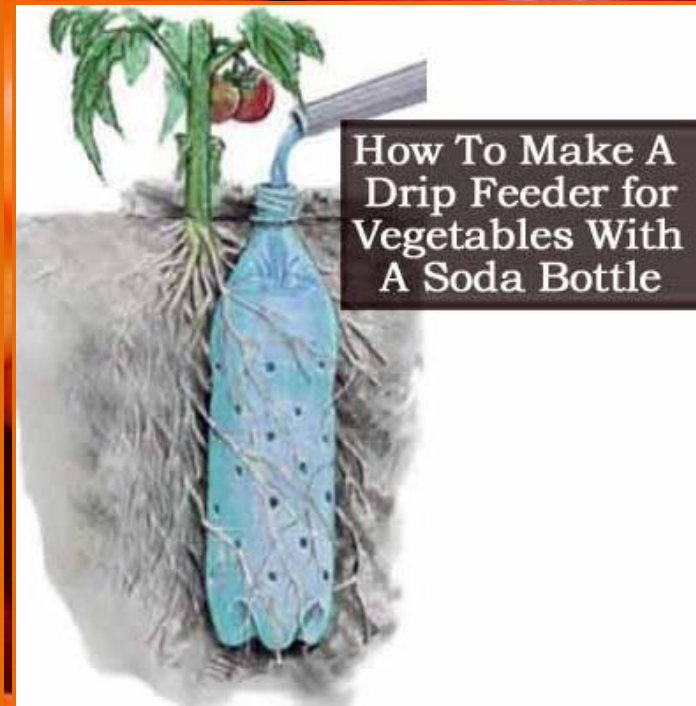
- Water at planting with a starter solution of 1 to 2 T of 6-8-6 fertilizer dissolved in 1 gal. of water
- Shade from direct sun for 2 – 4 days



Photo: Bruce Leander

Care

- Stake at planting time – or use a cage
- Water plants -1-2 in. of water/week
- Drip irrigation can reduce fungal disease
- Mulch and keep weeds pulled





Fertilizing Chemical vs. Organic

Chemical Fertilizers

- 6-8-8, 13-13-13, 10-10-10

Organic fertilizers

- Organic blends - Peggy Green (local), Gardener's Supply, Espoma
- **Apply at planting time**
- **3 weeks after planting as a side dressing**
- **After 3 more weeks, apply at 7 to 10 day intervals.**



Fertilizing Chemical vs. Organic

Organic fertilizers

- **If manure is used, mix well into the soil 4 - 8 weeks prior to planting.**
- **Fish emulsion – may also mix with Neem for spraying**
- **Kelp/Seaweed emulsion – fertilizer and growth enhancer**

Mulching

Mulch:

- Holds moisture in soil
- Helps control weeds
- Keeps fertilizer from leaching
- Harbors beneficial insects (organic mulches)

Types of mulch:

- Organic (leaves, straw, lawn clippings, etc)
- Plastic

Pests

Major pests

➤ Caterpillars

- Cutworms
- Army worms
- Loopers
- Leaf miners

➤ Aphids

➤ Pepper weevil

➤ Nematodes



Pest Control

- **Biological controls –**
 natural beneficial insects
- **Mechanical controls**
 - Floating row covers
 - Sticky cards (yellow, blue or white)
 - Hand removal
- **Cultural controls**
 - Companion Planting (Intercropping)
- **Solarization – soil borne pests**



Pest Control

➤ Organic pesticides

- *Bacillus thuringiensis* (Bt)
- horticultural oils – Neem, other plant based oils
- Insecticidal soap
- Copper or Sulphur fungicides
- Spinosad
- Pyrethrums
- Rotenone

➤ Chemical pesticides

- Carbaryl – Seven
- Malathion



Diseases

Damping off –

- Seedlings fall over and die– gently wet seedling stems with Neem oil



Anthracnose

- Primarily on fruit
- Control with Copper



Bacterial Spot

- Yellow raised spots on young leaves
- Wounds on fruit causing rot



Disease Control

➤ **Crop rotation** – rotate with crucifers or beans

➤ **Sanitation**

➤ **Rouging**

Fungal diseases – treat proactively

- Neem oil
- Copper and/or Sulfur fungicide
- *Bacillus subtilis* – creates protective barrier to fungus
- Garlic spray/Milk spray – questionable research results

➤ **Bicarbonate salts** – 0.5% solution – used to treat fungus already on leaves.

➤ **Summer Soil Solarization**



Varieties for Fall Planting

Sweet California Wonder — HEIRLOOM - 1928

introduction, largest open-pollinated bell. A perfect stuffing pepper—blocky 4" x 3½", thick-walled, tender and flavorful.

California Wonder 300 — Improved, leafy plant habit provides good sun scald protection and the large rich green fruit turn red on the bush. A great choice for cool growing conditions.



Varieties for Fall Planting

Sweet Banana - bears sweet, mild peppers that mature from yellow, to orange, and then to crimson red. Plants fruit prolifically. This pepper is great for frying, pickling, and is an excellent choice to make pepper rings for sandwiches. Great for containers.



Varieties for Fall Planting

Giant Marconi - Awarded All-America Selections recognition in 2001. It is one of the biggest Italian- type sweet peppers, with a sweet smoky flavor. Peppers ripen from green to red and are sweetest when red. They are great grilled or roasted. Plants are resistant to tobacco mosaic virus and potato Y virus. Keep peppers picked and they will continue producing until frost. If we have a mild winter they will continue to bear in the spring.



Varieties for Fall Planting

Cubanelle - yellow-green to red tapered fruit, prized for sweet, mild flesh, rich flavor and pretty colors for frying and cooking. The thin-walled pepper is especially suited for quick cooking. In the garden, Cubanelle peppers are unique, often growing in imperfect shapes and changing color from green/yellow to shades of orange to red. Don't be surprised if the some of the peppers curl and twist a bit.



Varieties for Fall Planting

Hungarian Hot Wax - HEIRLOOM - Long, banana-shaped waxy pepper used for frying, stuffing, or for pickled peppers. Ripens from green, pale yellow to deep golden orange to cherry red. Very productive even in cool weather. Can be harvested at various maturities. By picking them green, greenish-yellow, strongly-yellow or red you can control how much heat you want in the flesh of your pepper. If you want to save seed from them, you must let them ripen all of the way to red.





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