

Protecting yourself (Organically) from biting insects

- Essential oils (eucalyptus, lemongrass, citronella, tea tree oil or rosemary) are the ingredients of many natural insect sprays.



Protecting yourself from biting insects

- The CDC confirmed that lemon eucalyptus oil can be as effective as DEET in repelling mosquitoes. Oil of lemon eucalyptus [active ingredient: p-menthane 3,8-diol (PMD)], a plant-based repellent, is also registered with EPA. In two recent scientific publications, when oil of lemon eucalyptus was tested against mosquitoes found in the US it provided protection similar to repellents with low concentrations of DEET



Organic Control for corn earworms

- **Corn oil & Bt combo-** Bt kills them when they ingest it, oils smother them, and either one is recommended for control. Apply 5 drops of corn oil (apply only once) to corn ear tips when the silks begin to turn brown.



Organic lawn care

- **Hydrolyzed fish fertilizers** contain a very low count of N-P-K (nitrogen, phosphorous and potassium), which is ultimately better for the soil. Using fish emulsion and seaweed extract you can create a mineral and nutrient rich foliar spray to use in your lawn/garden. The plants can absorb a lot of minerals and nutrients via leaves and stems.



Organic lawn care

- This **Organic lawn fertilizer** is made from sterilized sewage sludge(Biosolid). Although it contains only 6 percent nitrogen and 2 percent phosphorous, it works well as a lawn fertilizer but not as quickly as higher-nitrogen products and with much less risk of burning the turf.



Japanese Beetle control/ Lawns

- Originally developed by the USDA, Milky Spore is a naturally occurring bacteria *Bacillus popilliae* host-specific to Japanese beetles. In areas treated by Milky Spore, Japanese beetle grub eat the spores during their normal feeding patterns. Then the spores reproduce inside the grub, eventually killing grub within 7-21 days. As the grub decomposes, it releases millions of new spores and these multiply and kill other grubs.



Organic crabgrass control

- **Corn gluten meal** is a powdery byproduct of the corn milling process. Used for years as a supplement in hog feed, this natural protein is very effective for lawns and gardens as a plant food as well as a weed suppressor. Corn gluten meal products offer a non-toxic, yet effective alternative to traditional, chemical-based weed and feed products for weed control in gardens and lawns, paths and driveways.



Organic crabgrass control

- As a plant food, **corn gluten** has a N-P-K ratio of 9-1-0, or 9% nitrogen by weight. As a weed suppressant, corn gluten acts as a natural "pre-emergent" - it inhibits seed germination by drying out a seed as soon as it cracks open to sprout. These qualities make corn gluten an ideal 'weed n feed' product.

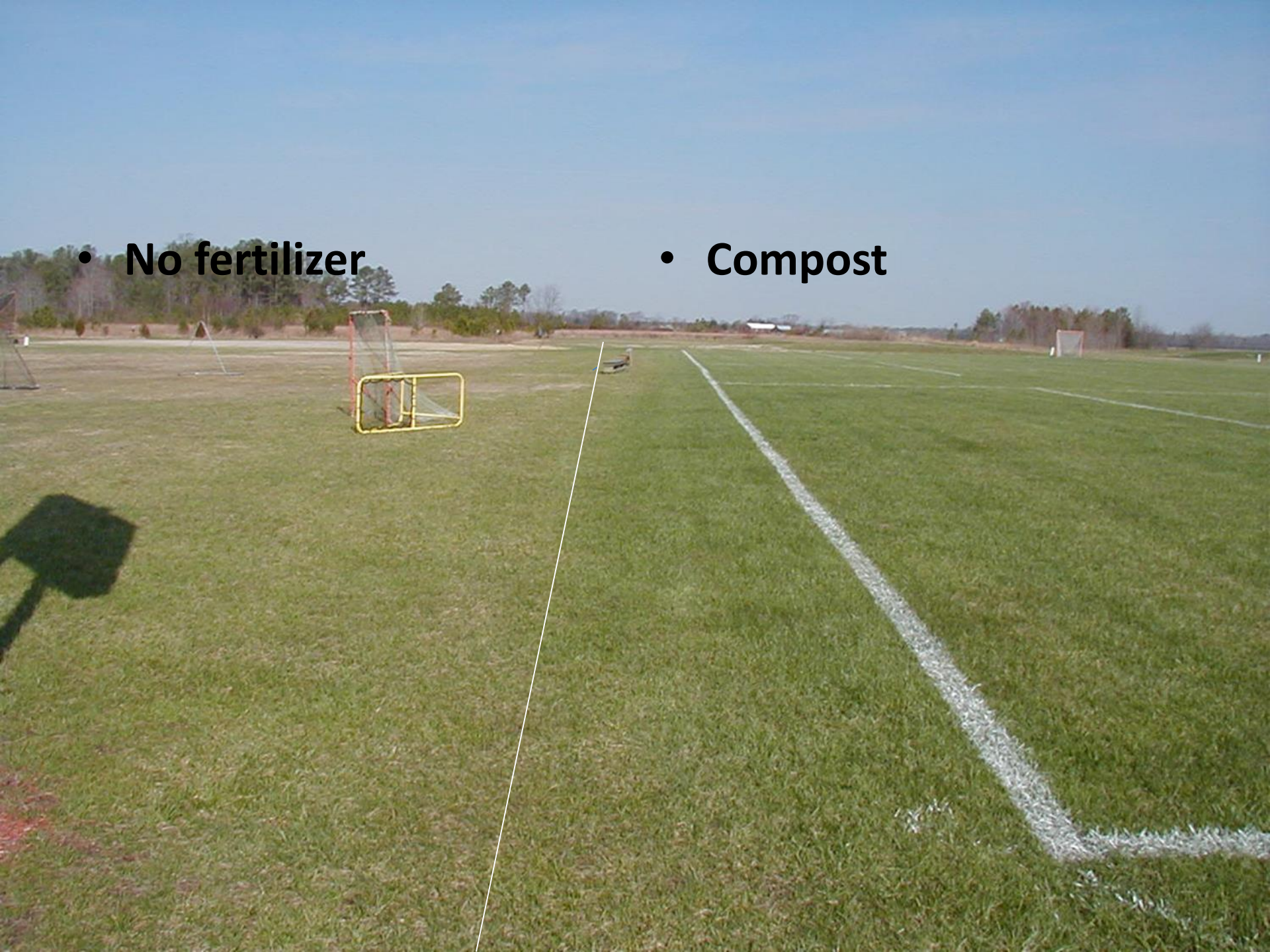


Organic lawn care



- **No fertilizer**

- **Compost**





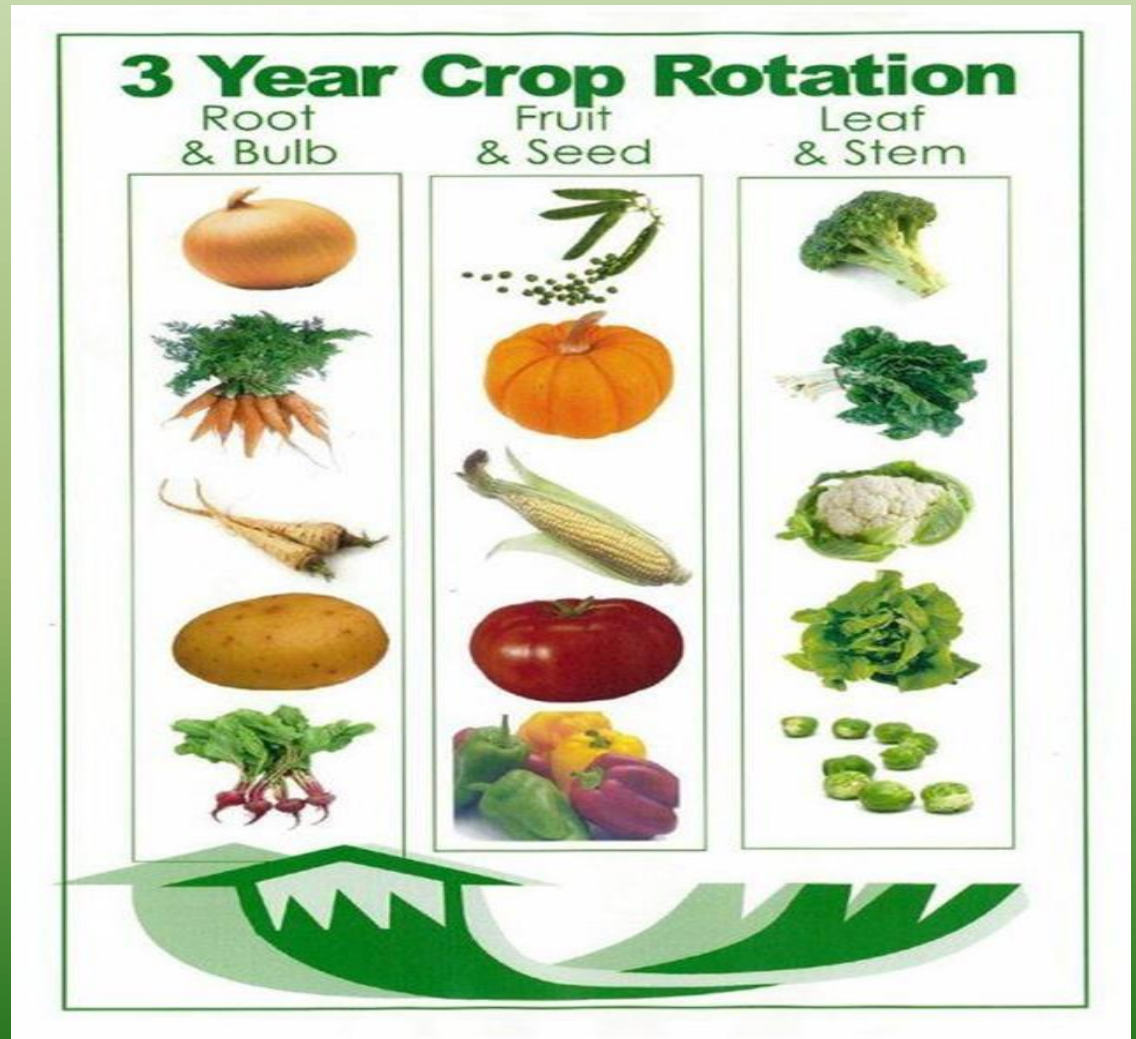
- Synthetic fertilizer
- 1 "Compost
- 2" Compost
- Compost blanket

Vegetables-Crop Rotation

- Crop rotation is a systematic approach to deciding which crop to plant where in your vegetable garden from one year to the next. The goals of crop rotation are to help manage organic soil fertility and also to help avoid or reduce problems with soil-borne diseases and some soil-dwelling insects.

Crop Rotation

- Root = Potassium
- Fruit = Phosphorus
- Leaf = Nitrogen
- Legume = N Fixing



Companion Planting: Love/Hate Relationships in the Garden

- When you observe plants in an undisturbed natural setting, you may not realize that often they grow where they grow because they have a beneficial relationship with each other. It makes sense that when you follow through with this concept of mutual benefit in your own garden, you not only have flourishing plants, you also don't need an arsenal of chemicals to promote these happy relations.

Companion planting (Beneficial Habitat)

- **Marigolds** are among the foremost examples of an attractive cultivated plant that helps repel or suppress pests by releasing a chemical deterrent. Nematodes (the unbeneficial kind) are among those plant-attacking insects repelled by thiophene, the chemical found in marigolds. This chemical is released in the soil from the plant's roots. Marigolds (go for the aromatic ones) are also believed to deter a variety of other pests through a scent that's obnoxious to many insects.



Companion planting (Beneficial Habitat)

- **Marigolds** also attract pollinators



Companion planting (Beneficial Habitat)

- Planting a border of marigolds around your garden may deter insects or conceal the scent of your vegetables, advises the Alabama Cooperative Extension Service.



Companion Planting (Beneficial Habitat)

- **Basil & Insects**
- Basil makes a great companion plant because it attracts butterflies to your garden and repels many harmful insects. Basil repels aphids, asparagus beetles, mosquitoes, tomato hornworms and white flies.



Companion Planting (Beneficial Habitat)

Dill is a great companion for:

- Asparagus.
- Corn.
- Cucumbers.
- Onion.
- Lettuce.
- Vegetables in the cabbage family (Brussels sprouts, kohlrabi, broccoli, etc.)



Companion Planting (Beneficial Habitat)

- When considering rosemary companion planting, the best companion plant is broccoli as both plants benefit from being planted together. Planting rosemary nearby will also help your beans, broccoli, cabbage, carrots and hot peppers to flourish



“There’s rosemary, that’s for
remembrance.” -Hamlet,
Shakespeare



Scientists find
sniffing rosemary
can increase
memory by 75%

Please share!

Natural News

Companion planting

Dill planted among tomatoes can protect the tomatoes from tomato hornworms.

Some companions act as trap plants, luring insects to themselves. **Nasturtiums**, for example, are so favored by aphids that the devastating insects will flock to them instead of other plants.

Leafy greens like **spinach and Swiss chard** grow in the shadow of corn.

Bush beans tolerate the dapple shade that corn casts and, since their roots occupy different levels in the soil, don't compete for water and nutrients.

Sage scattered about the cabbage patch reduces injury from cabbage moths.

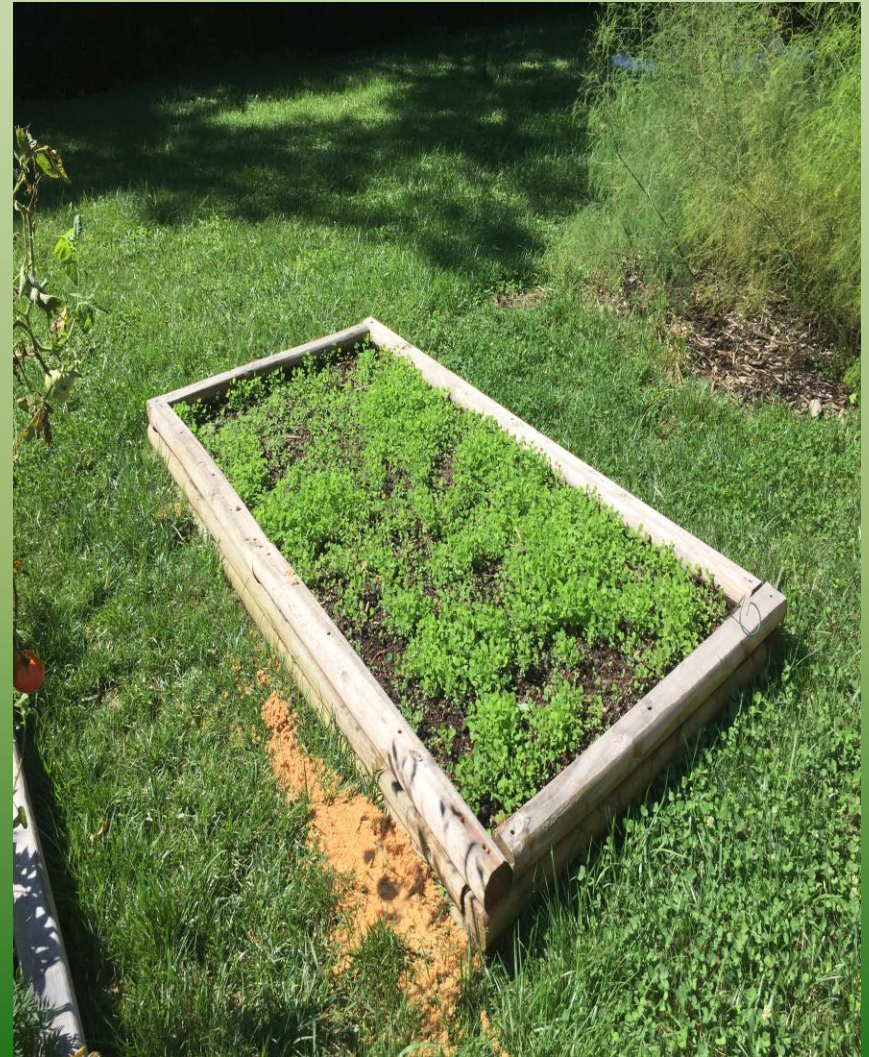
Geraniums A trap crop, attracting pests away from roses and grape vines, distracts beet leafhoppers, carrier of the curly top virus, keep away from solanaceous plants like eggplant and peppers.

Cover crop (nitrogen fixer)

- **BENEFITS OF USING CRIMSON CLOVER AS A COVER CROP:**
- Nitrogen Fixation
- Improve Soil Quality
- Weed Suppression
- Erosion Control
- Attracts Beneficial Insects
- Builds Soil Organic Matter
- Increases Moisture Holding Capacity



Cover crop (nitrogen fixer)



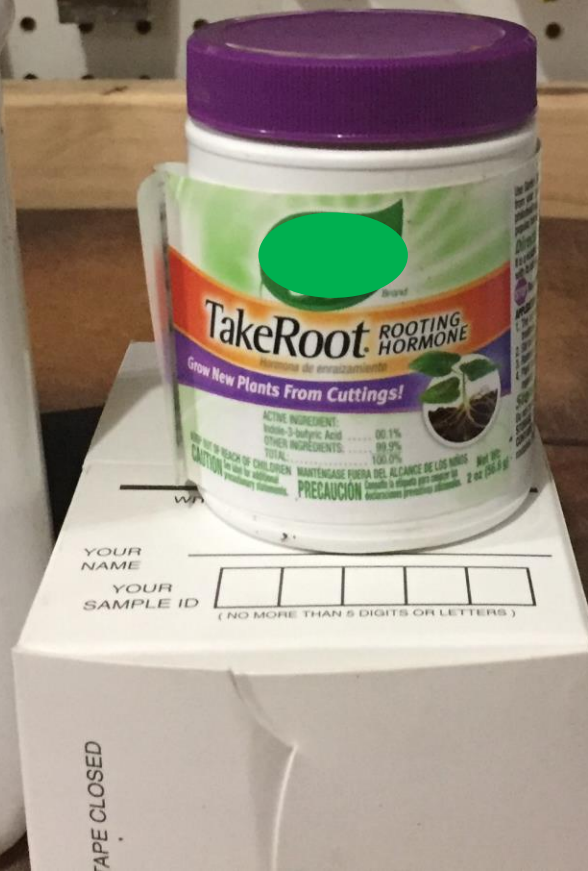
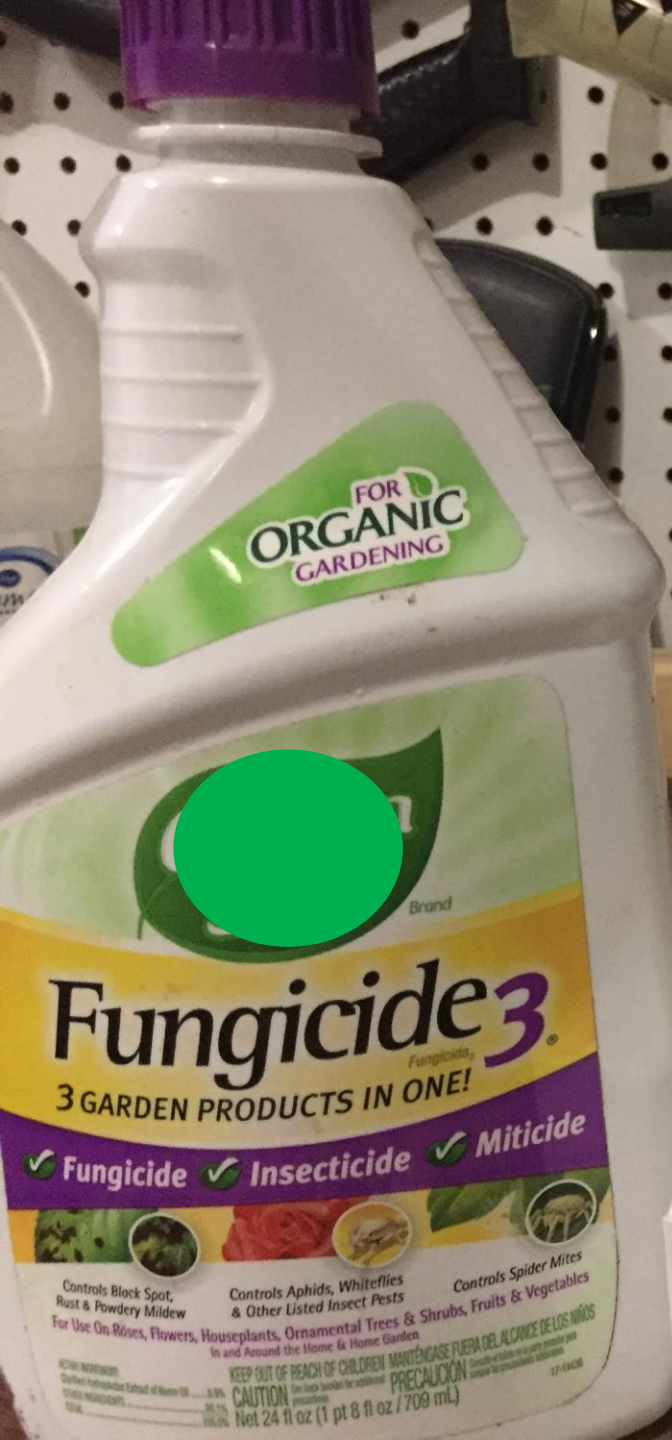




Organic? rooting hormone

- **U.S. Environmental Protection Agency**
- IBA is registered as a biochemical pesticide with the PC Code 046701. Historically, US EPA registered IBA as a synthetic hormone that is structurally related to the naturally-occurring plant hormone IAA (EPA, 1992). Recently, EPA became aware that IBA also occurs naturally in a variety of plant species (EPA, 2010) and would include this fact in its future documents about IBA (EPA, 1992; EPA, 2010).





Safety Data Sheet

GHS Classification of Substance or Mixture: Not classified as a physical hazard

GHS Label Elements:

Hazard pictogram(s):

Signal word:

Hazard statements:



WARNING

- Causes eye irritation
- Harmful if inhaled

Precautionary Statements:

- Wash hands thoroughly with soap and water after handling. If in eyes: Rinse cautiously with soap and water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
- Avoid breathing dust. Use only outdoors or in a well-ventilated area. If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison control center or doctor if you feel unwell.

Section 3 - Composition / Information on Ingredients

Chemical Name	CAS#	Weight Percent
Indole-3-butyric acid	133-32-4	0.10%

Note: Ingredients not identified are proprietary or non-hazardous. Values are not product specifications.

Section 4 - First Aid Measures

Eye contact:

Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing. Call a poison control center or doctor for treatment advice.

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Safety Data Sheet

Garden Safe Brand TakeRoot Rooting Hormone

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Revision date: 2/22/2016

Organic? rooting hormone

- Commercial rooting hormone contains Indole-3-butyric acid, a concentrated **synthetic** version of this naturally occurring rooting hormone, as well as a chemical fungicide.



Organic rooting hormone

- **Honey** has many health benefits. It is a natural antiseptic and contains antifungal properties — both of which are believed to be one of the reasons honey as a root hormone seems to work so well.



Organic rooting hormone

- Willow trees possess a certain hormone that can be used to enhance root development in plants. This makes it possible to grow a new plant simply by pouring willow water over it or by rooting plants in water made from willows.



Organic rooting hormone (from Willow Trees)

- Remove any leaves and cut them into 1- inch pieces. This allows more of the auxin hormone, IBA, which encourages root growth, to leach out.



Organic rooting hormone (from Willow Trees)

**Cut branches (green if possible)
into 1' pieces**

**Place in a container
that can be sealed**



Organic rooting hormone (from Willow Trees)

Boil water

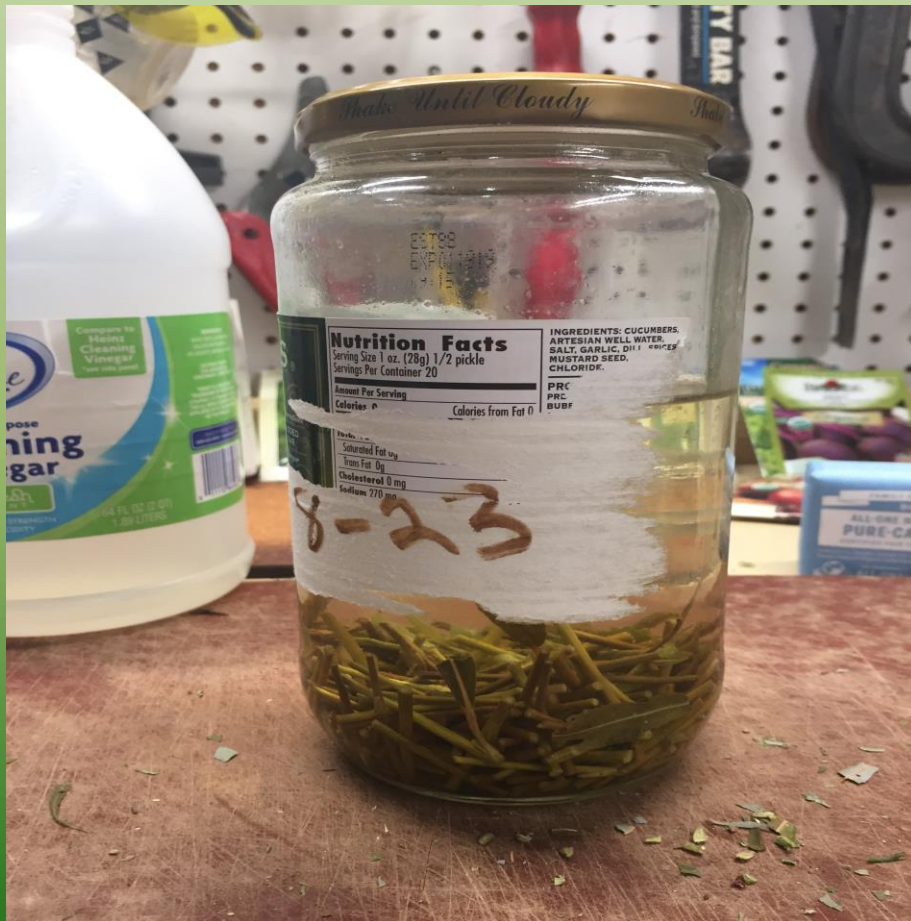
Pour into jar with cuttings -1/3 twigs to 2/3 water- seal and date



Organic rooting hormone (from Willow Trees)

Let sit for 24-48 hours.

48 hours later- strain out the willow
–liquid remaining ready to use



Organic rooting hormone (from Willow Trees)



Organic rooting hormone (from Willow Trees)

Compost Leaf sludge



Comparison of solutions



Propagating Using Organic rooting hormone (from Willow Trees)

Take your cutting



Trim the lower leaves

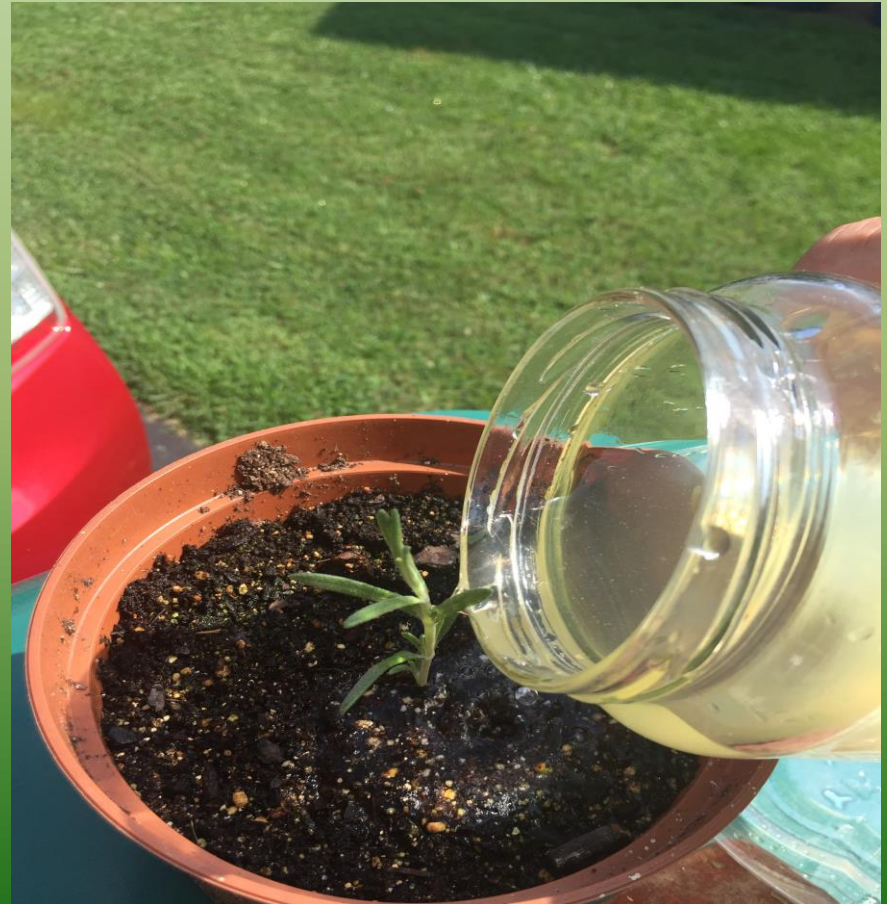


Propagating Using Organic rooting hormone (from Willow Trees)

Dip cutting in rooting solution



Place cutting in growing medium



Propagating Using Organic rooting hormone (from Willow Trees)

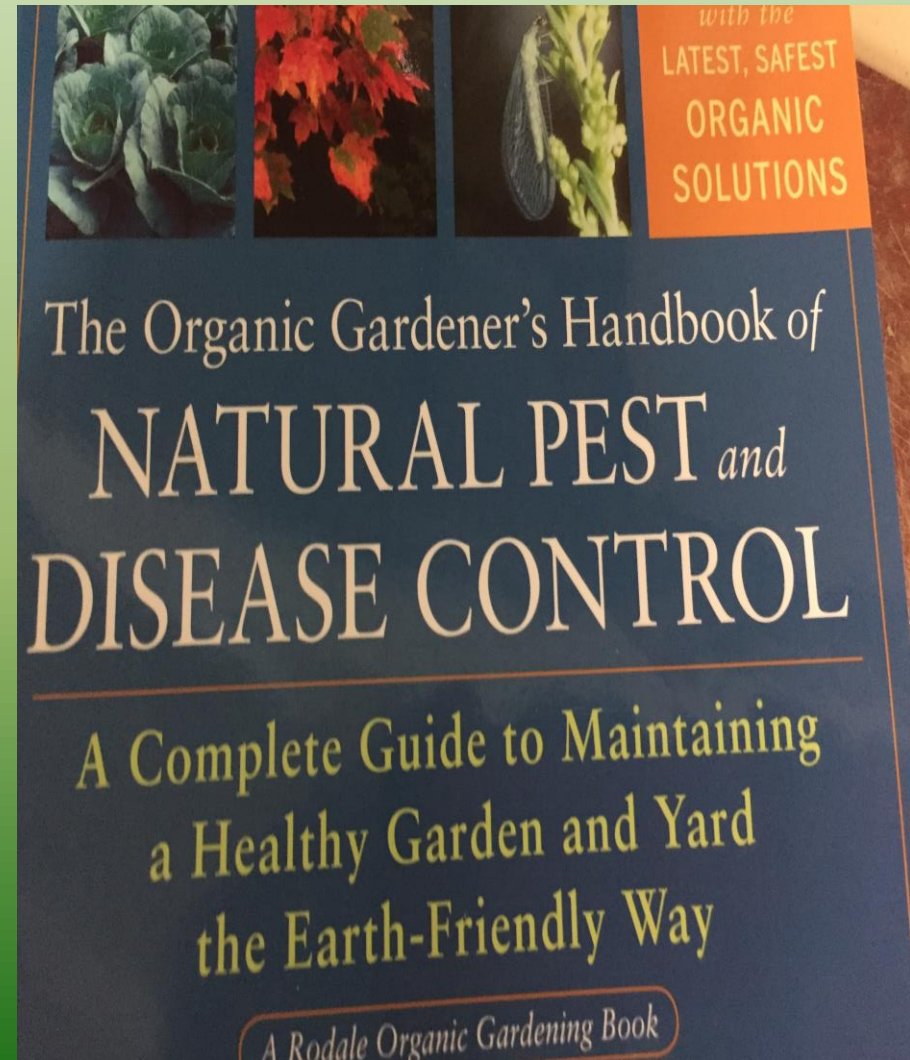
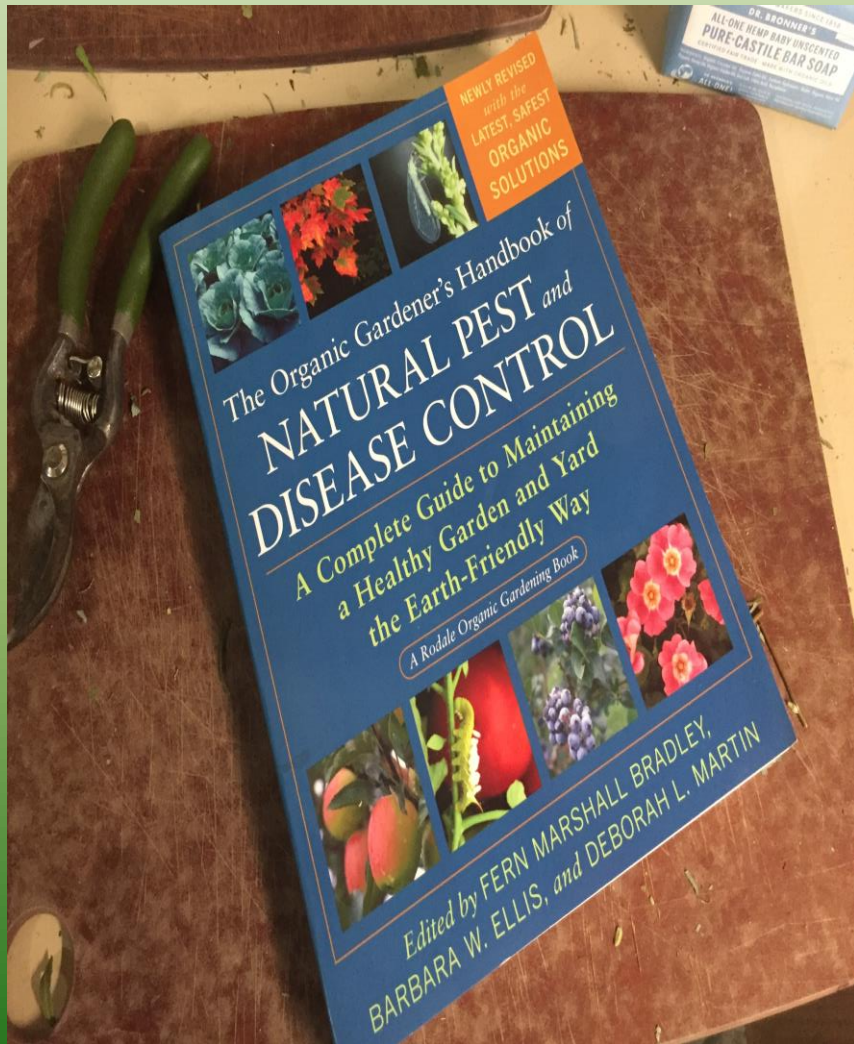


3 uses for Cinnamon

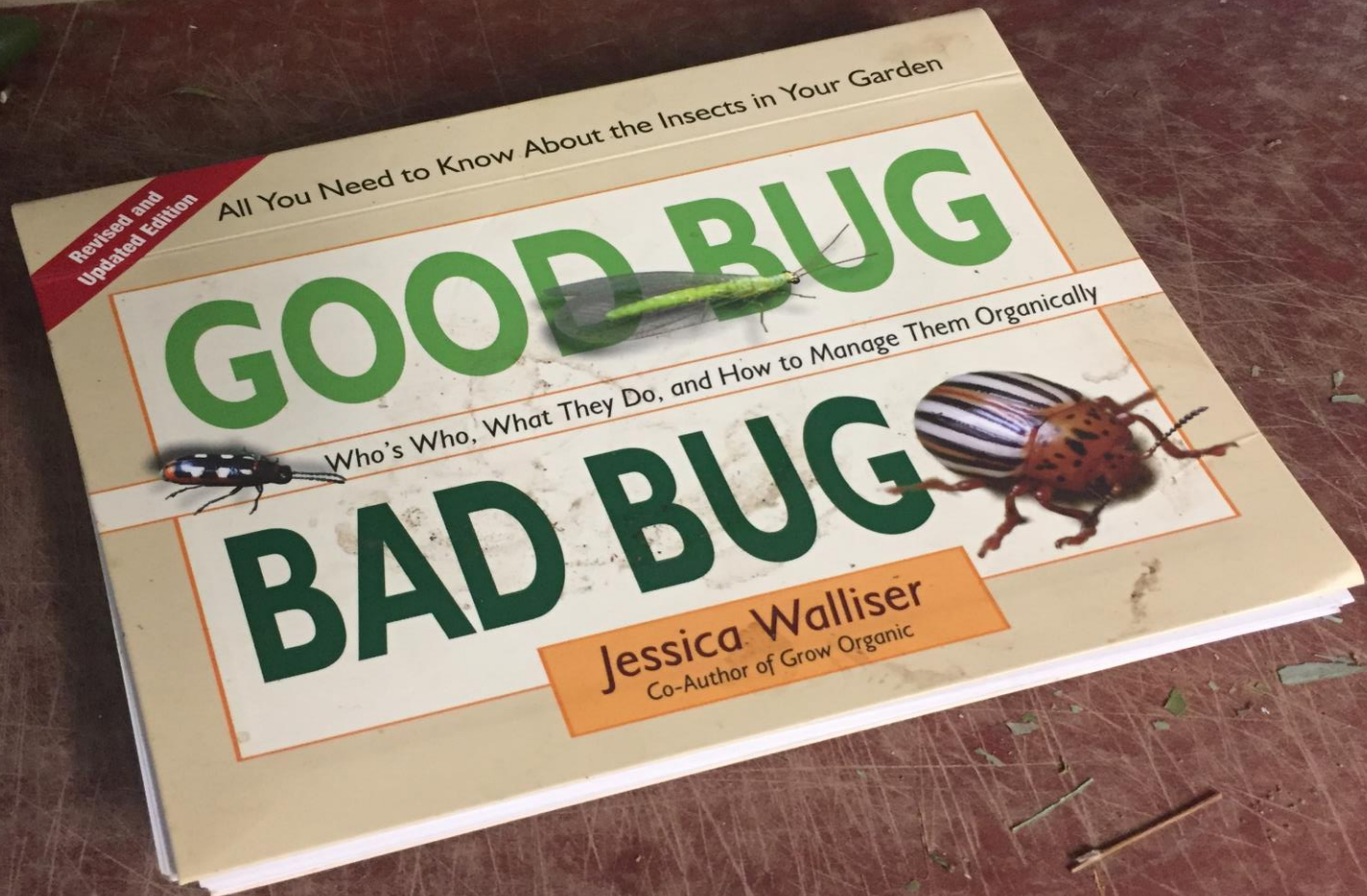
- Cinnamon kills fungus and bacteria and will help to keep those cuttings free of disease while rooting. You can dip your cutting in willow tea and then cinnamon, they go hand in hand.
- For Seedlings.
- Plant wounds-Overzealous pruning or a slip of the weed whacker and you'll have a plant with a wound that needs fixed up. Simply dust cinnamon on the wound to encourage healing and prevent fungal infection at the same time.



Must-Have books



Must-Have books



Do your research!!

- <https://www.usda.gov/topics/organic>
- <https://www.ams.usda.gov/rules-regulations/organic>
- <https://content.ces.ncsu.edu/extension-gardener-handbook/17-organic-gardening>
- Organicgrowersschool.org
- Motherearthnews.com
- Southernexposureseed.com
- Dr. Jeanine Davis, NC State extension
<https://www.youtube.com/watch?v=0O7tm46PBq>





Don't believe
everything you read
on the internet just
because there's a
picture with a quote
next to it.

ALBERT EINSTEIN

