AgriLIFE EXTENSION
Texas A&M System

Organic Gardening

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Texas A&M
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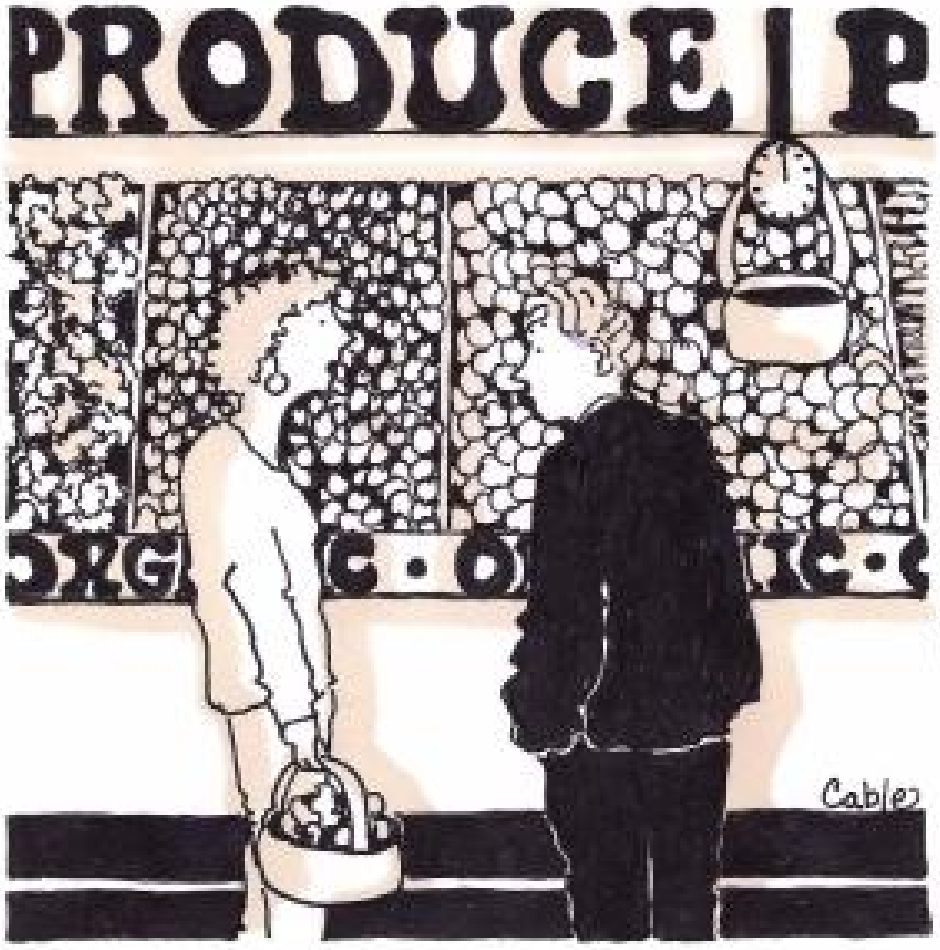
Improving Lives. Improving Texas.

Overview

- **Organics –**
  - **What does it mean and how is it different**
- **Growing Organically**
  - **It starts with the soil**
  - **Plants**
  - **Fertilizing organically**
  - **The BIG 3:**
    - **Weed, disease, and insect control the organic way**
- **Resources for organic gardening**
- **Question and Answer**

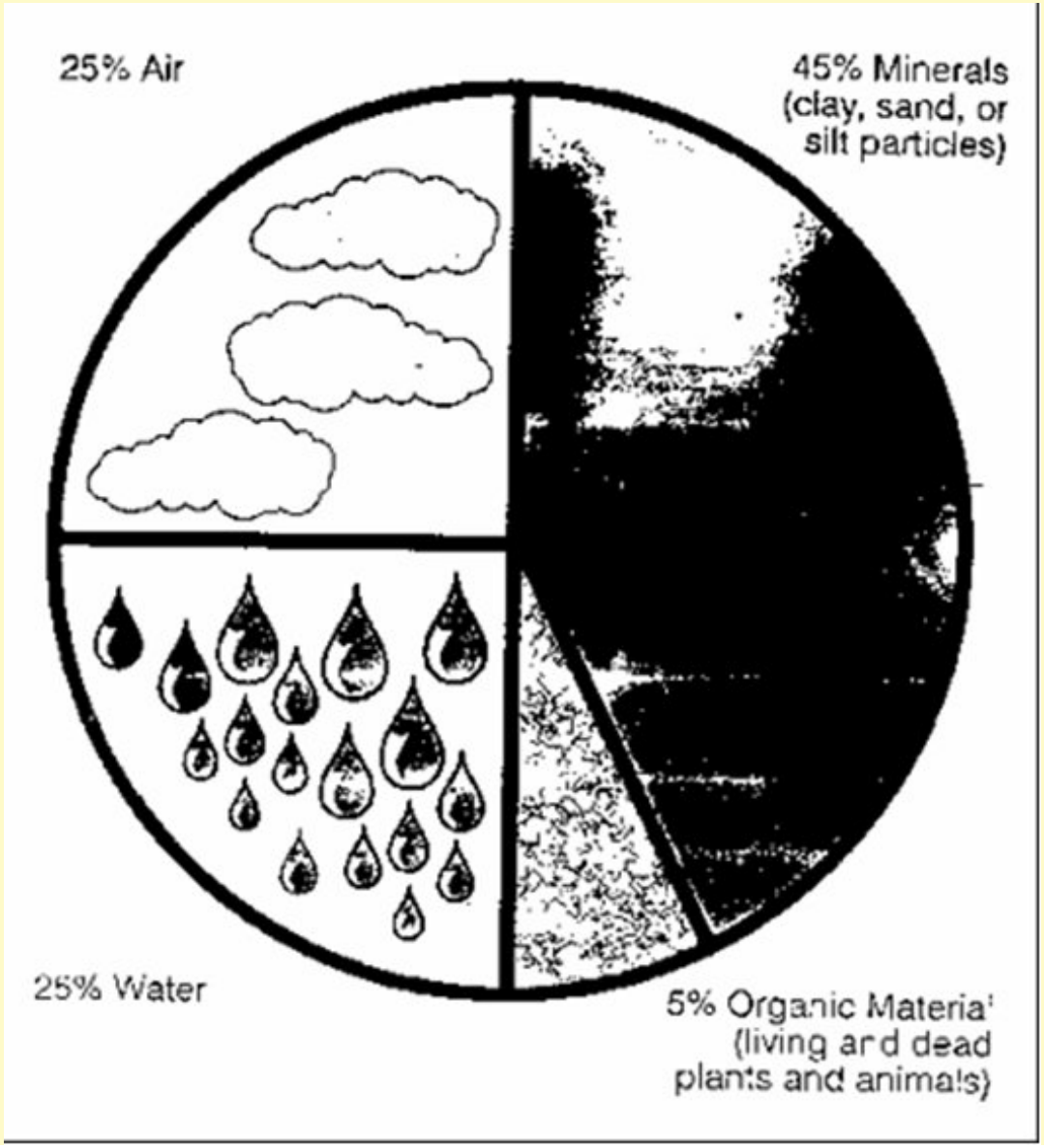
What does ORGANIC mean?

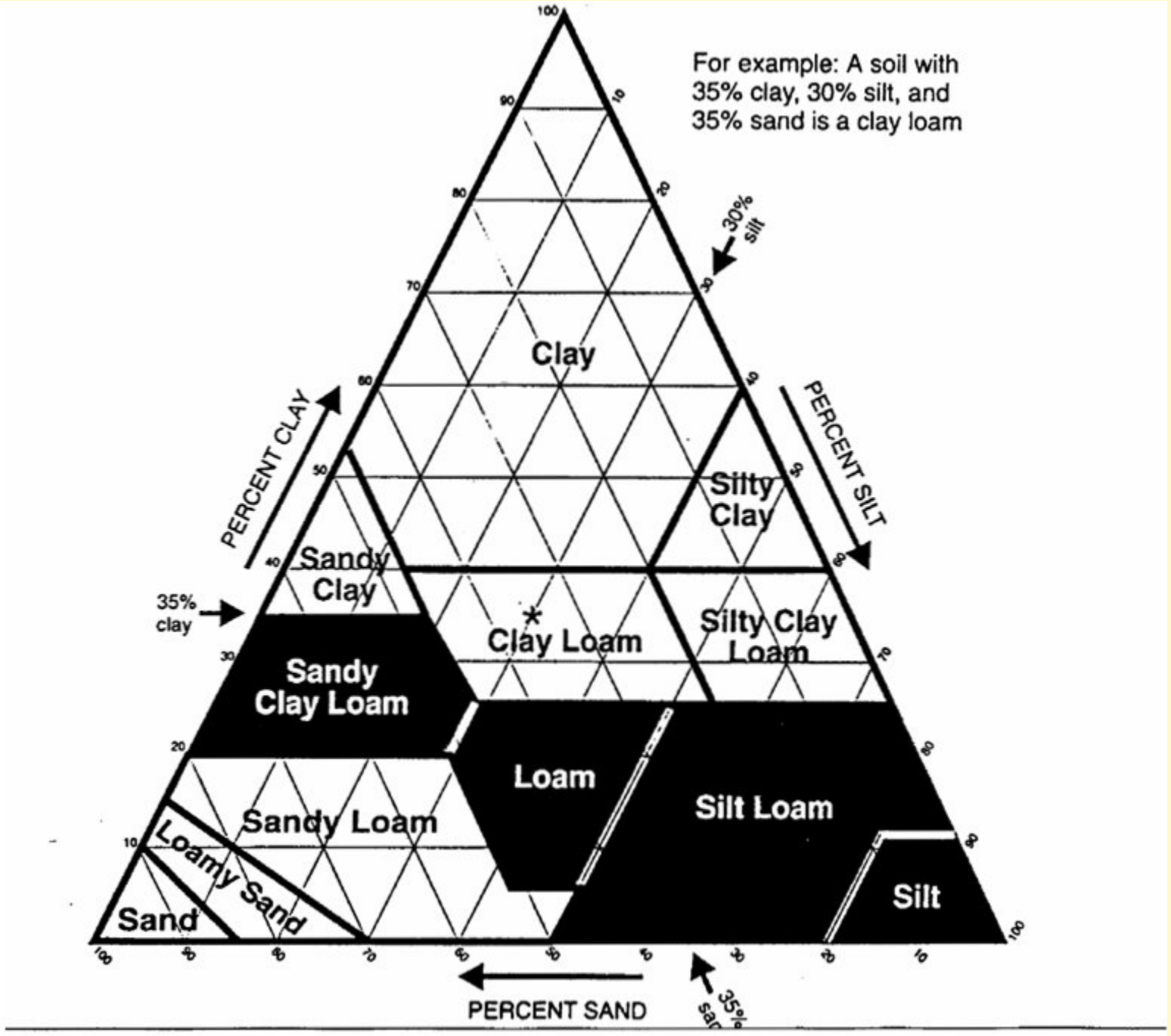
"Organic agriculture is an ecological production management system that promotes and enhances biodiversity, biological cycles and soil biological activity. It is based on minimal use of off-farm inputs and on management practices that restore, maintain and enhance ecological harmony."

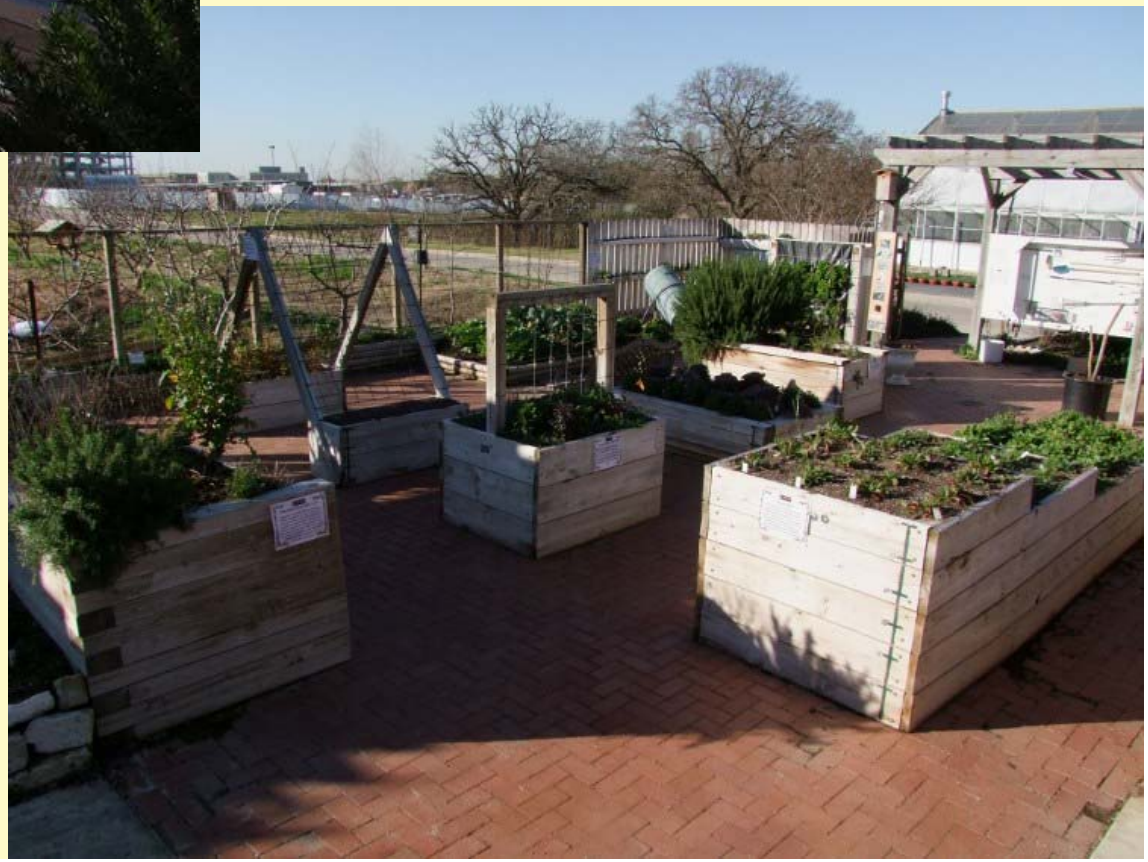


"And to think — when our parents were our age, nothing was organic."

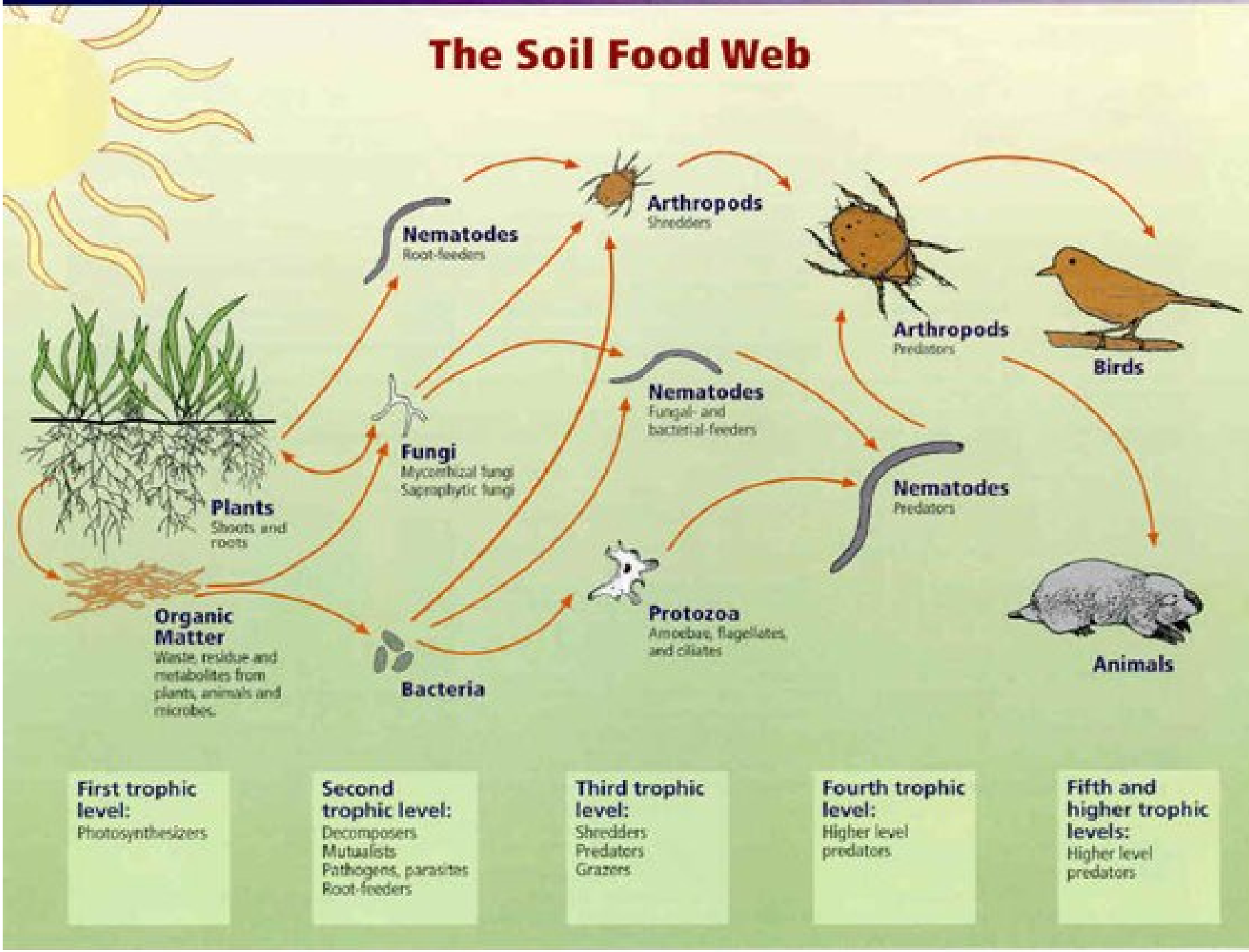
It all starts with the soil…




For example: A soil with
35% clay, 30% silt, and
35% sand is a clay loam
Clay
Silty Clay
Sandy Clay
Clay Loam
Silty Clay Loam
Sandy Clay Loam
Loam
Silt Loam
Silt
Sandy Loam
Loamy Sand
Sand
PERCENT CLAY
PERCENT SILT
PERCENT SAND
30% silt
35% clay
35% sand



The Soil Food Web



First trophic level:
Photosynthesizers

Second trophic level:
Decomposers
Mutualists
Pathogens, parasites
Root-feeders

Third trophic level:
Shredders
Predators
Grazers

Fourth trophic level:
Higher level predators

Fifth and higher trophic levels:
Higher level predators

Fostering a Healthy Soil Food Web

- **Avoid unnecessary tilling**
- **Water effectively**
- **Use mulch**
- **Feed your soil**

Organic Matter

Increased by:

- **Compost**
- **Cover crops**
- **Leaves**
- **Manure**
- **Mulch**

Decreased by:

- **Tillage**
- **Hot, humid conditions**

Compost

Five Requirements for Composting:

- **Plant Material**
- **Moisture**
- **Aeration**
- **Temperature**
- **Microbes**

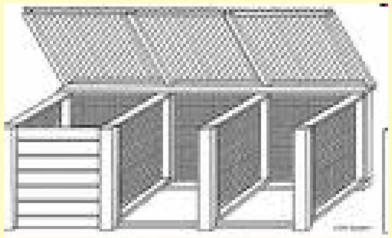


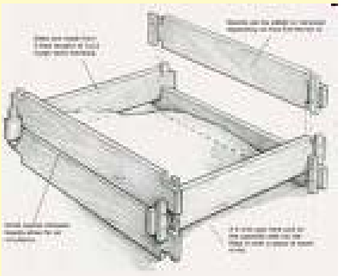




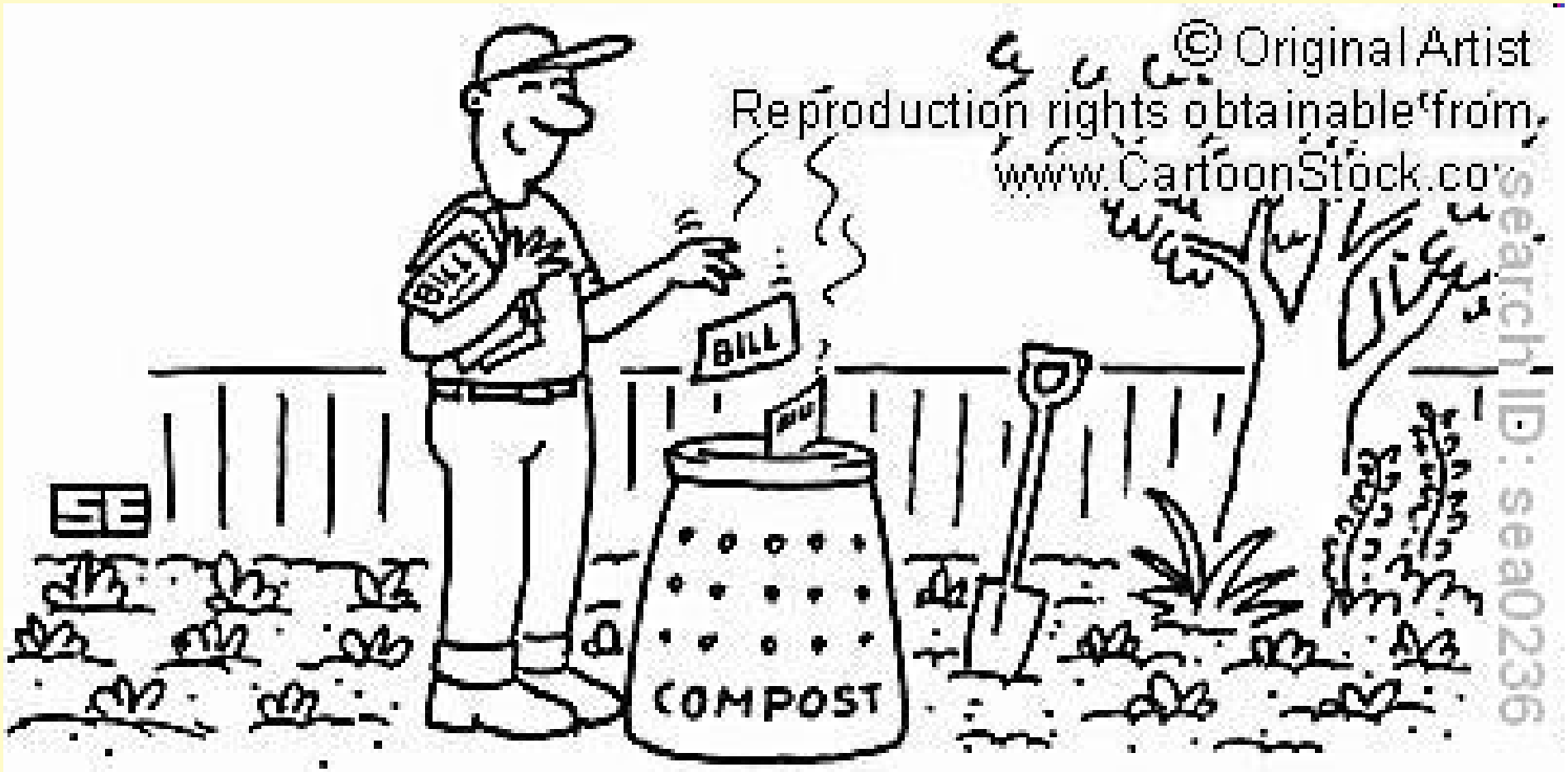






Bert always found plenty of rubbish for his compost bin.

To Compost or Not To Compost

Allowed

- **Coffee grounds**
- **Fire ashes**
- **Fruit and vegetable scraps**
- **Grass clippings**
- **Leaves**
- **Manure**
- **Paper & Paper towels**
- **Plants**

Not Allowed

- **Cat & dog feces**
- **Dairy products**
- **Magazines & glossy paper**
- **Meats**
- **Oils**
- **Weeds & diseased plants**

Mulching your Garden

- **Compost**
- **Hay and Straw**
- **Leaves**
- **Newspaper**
- **Plastic**
- **Rice hulls**
- **Straw**
- **Wood shavings**

Plants

- **Plant selection**
- **Plant Diversity**
- **Crop Rotations**
- **Companion planting**

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Vegetable Varieties
For Travis County

January 2009

Compiled by Skip Richter, Travis County Extension Director and Patty Leander, Master Gardener

ARTICHOKE	Days to Harvest
Green Globe	>150
Imperial Star	>100
ASPARAGUS	
UC 157	3 years
UC 72	3 years
Jersey Giant	3 years
BEANS	
Bush	
Contender	55
Derby	57
Goldito	54
Jade	60
Maxibel	50
Provider	50
Roma II	53
Tendergreen	55
Topcrop	50
Pole	
Kentucky Wonder	65
Garden of Eden	65

CABBAGE	Days to Harvest
Blue Vantage	76
Early Jersey Wakefield	62
Golden Acre	64
Red Acre	74
Ruby Perfection	75
CHINESE	
Jade Pagoda	72
Joi Choi	55
Mei Qing Choi	45
Michihili	78
Monument	80
Tatsoi	45
CANTALOUPE (Muskmelon)	
Ambrosia	86
Caravelle	80
Hale's Best	82
Super 45	80
Tam Uvalde	85
CARROTS	
Chantenay Red Core	65

CUCUMBER	Days to Harvest
Pickling	
Calypso	52
Carolina	49
Cool Breeze	45
Eureka	56
Homemade Pickles	55
Slicing	
Diva	58
General Lee	55
Suyo	61
Straight Eight	63
Sweet Success	54
Sweet Slice	62
Tasty Jade	54
EGGPLANT	
Black Beauty	74
Ichiban	61
Fairy Tale	65
Neon	65
Ping Tung Long	65

Vegetable Garden Planting Guide

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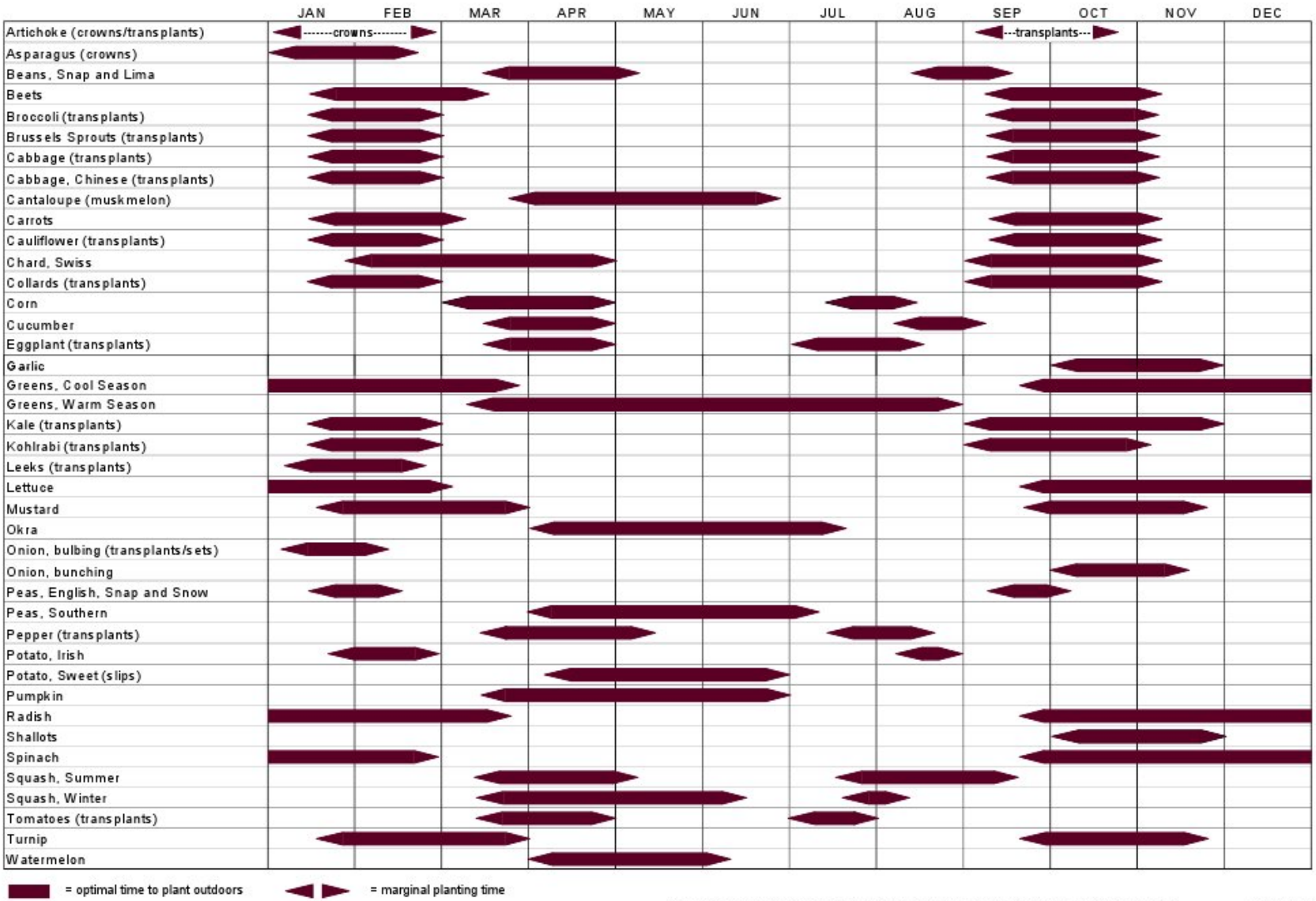
for Travis County

Time to plant seeds unless otherwise noted



= optimal time to plant outdoors

= marginal planting time

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January 2009

Organic Fertilizers

Fertilizer	NPK Analysis	Application Rate
Alfalfa Meal/Pellets	2-1-2	2-5 lbs/100 sq.ft.
Bat Guano	10-3-1 3-10-1	5 lbs/100 sq.ft.
Blood Meal	12-0-0	5-10 lbs/100 sq.ft.
Bone Meal	3-15-0	10 lbs/100 sq.ft.
Compost (Plant-based)	Varies	2-3” over surface
Compost (Manure-based)	Varies	1” over surface

Organic Fertilizers Continued

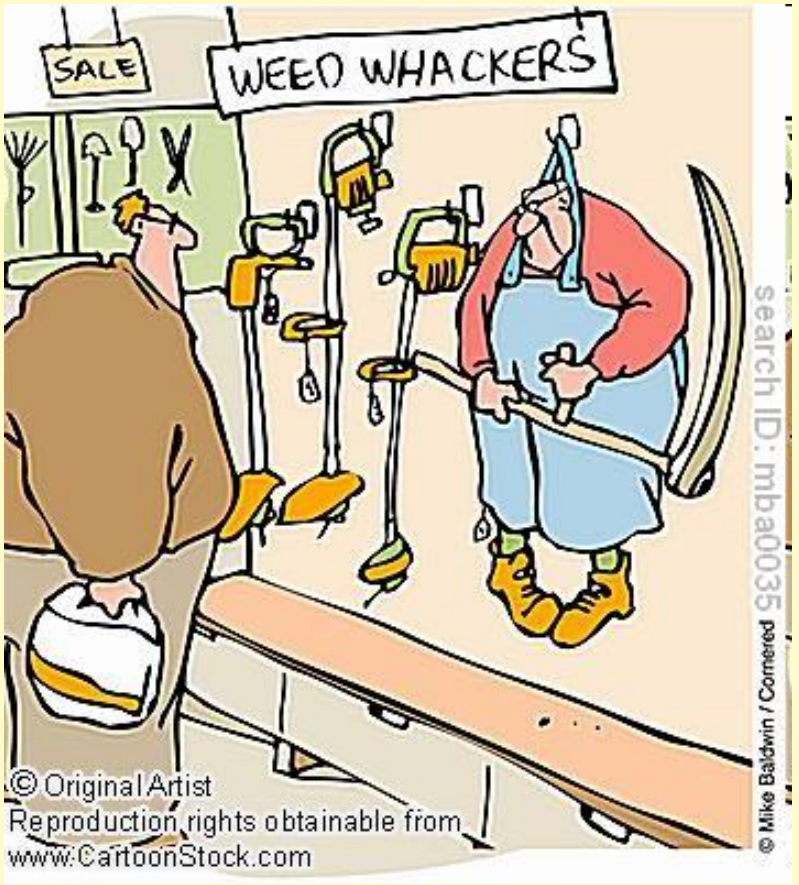
Fertilizer	NPK Analysis	Application Rate
Corn Gluten Meal	9-0-0	20-40 lbs/100 sq. ft.
Feather meal	Varies	2.5-5 lbs/100 sq. ft.
Fish Emulsion	5-2-2	6 tbsp/gallon of water
Fish meal	10-6-2	5-10 lbs/100 sq. ft.

THE BIG 3

- **Weeds**
- **Insects**
- **Diseases**

Weed Control

- **Cover cropping**
- **Mulching**
- **Smother cropping**
- **Mowing**
- **Cultivating/Hoeing**
- **Flaming**



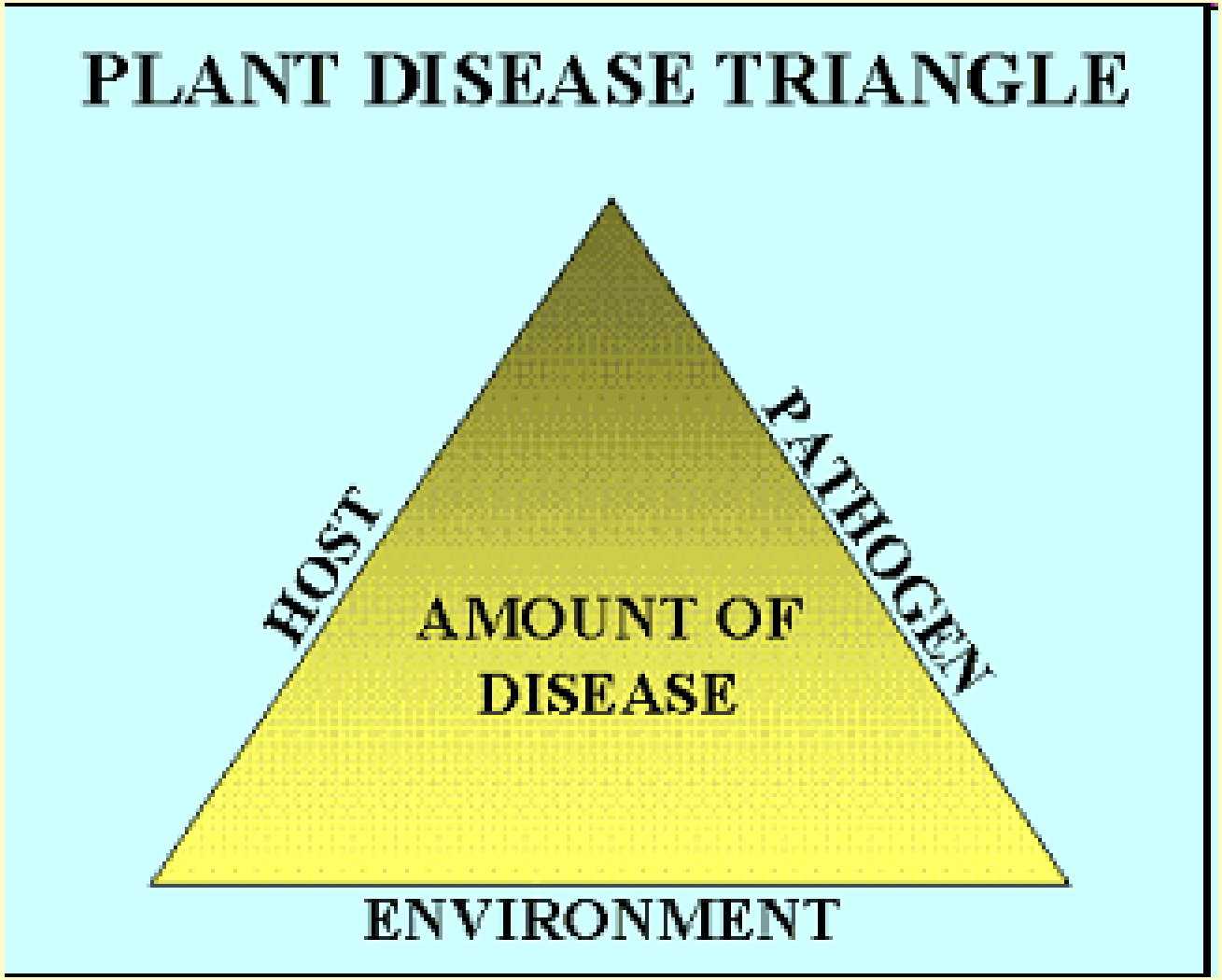
Insect Control

- **Promote beneficial insect populations**
- **Row covers**
- **Trap crops**
- **Planting date**
- **Intercropping/Crop diversity**
- **Sanitation**

And if that doesn't work…

- **Water**
- ***Bacillus thurengiensis (Bt)***
- **Insecticidal Soaps**
- **Neem oil (Azadirachtin)**
- **Spinosad**

Disease Control



Disease Control

<u>Prevention</u> is the key

- **Disease resistant varieties**
- **Site selection**
- **Crop rotation**
- **Plant spacing and training**
- **Mulching**
- **Sanitation**

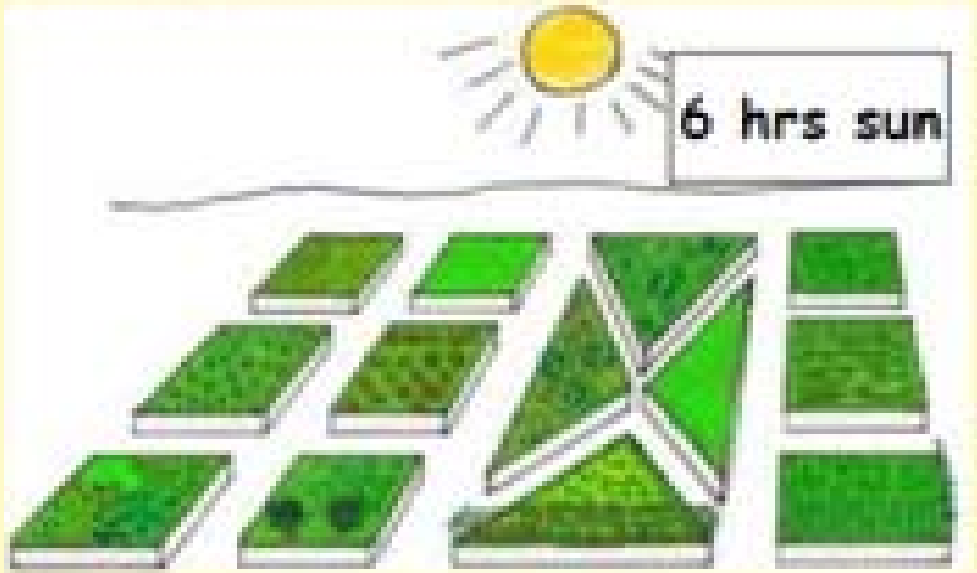
Before-you-plant Practices

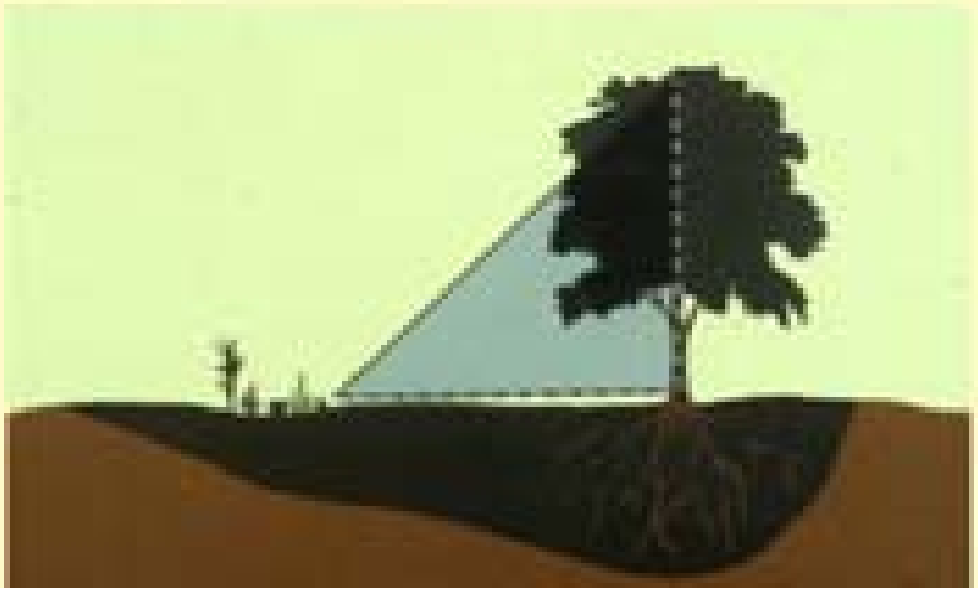
Cultural

- Choose a good site
- Soil test to determine fertility needs
- Soil test to determine presence of parasitic nematodes
- Rotate crops

Site Selection

- Light: > 6 hr
- Garden Orientation
- Soil
- Access
- Drainage
- Proximity to trees & shrubs





Poorly drained areas should be avoided or improved

Location, Location, Location

6-8 hours of sun, close and convenient

Soil Test

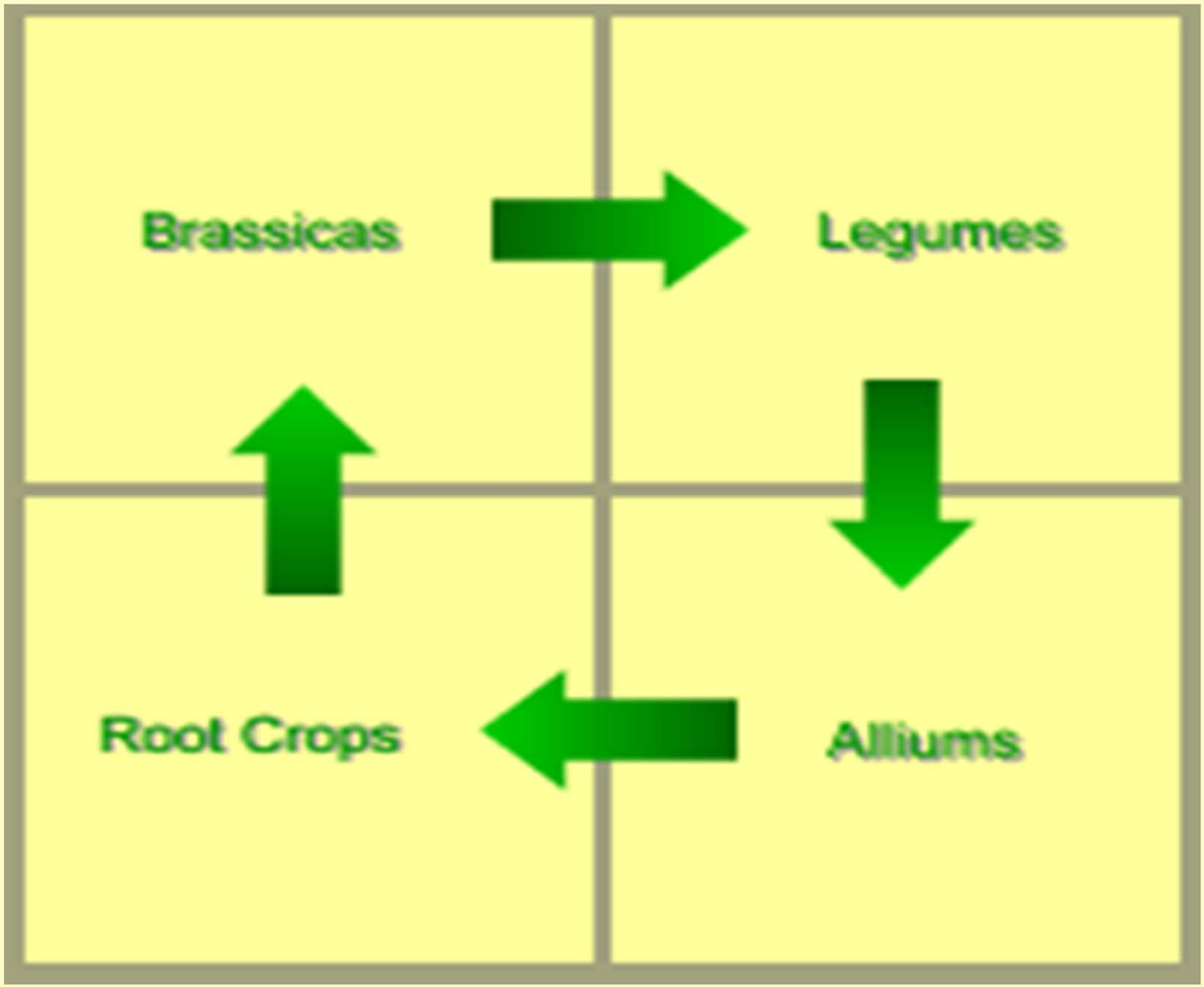
- Routine soil test at A&M = $10 to $20
  http://soiltesting.tamu.edu

- Test recommended every 3-4 years

General fertilizer recommendation:

- 1 cup high N fertilizer (21-0-0 or 15-5-10)
  OR
  2-3 cups organic (8-2-4 or 6-2-2) per 25 ft or row

Crop Rotation



Vegetable Families

Family	Crop
Crucifereae	Kale, Cauliflower, Cabbage, Broccoli, Brussels Sprouts, Kohlrabi, Radish, Turnip, Mustard
Solanaceae	Potatoes, Tomatoes, Eggplant, Pepper, Tobacco
Amaryllidaceae	Chives, Garlic, Leek, Onion, Shallot
Chenopodiaceae	Beet, Spinach
Gramineae	Corn
Compositeae	Artichoke, Lettuce, Endive
Leguminoseae	Pea, Bean
Apiaceae	Carrot, Celery, Cilantro, Dill, Parsley, Parsnip
Cucurbitaceae	Cucumber, Melon, Pumpkin, Squash, Zucchini, Gourd

Good Rotation

Year 1

Spring = tomato

Fall = Spinach

Year 2

Spring = Bean

Fall = Mustard

Year 3

Spring = Cantaloupe

Fall = Onion

Bad Rotation

Year 1

Spring = tomato

Fall = Irish potato

Year 2

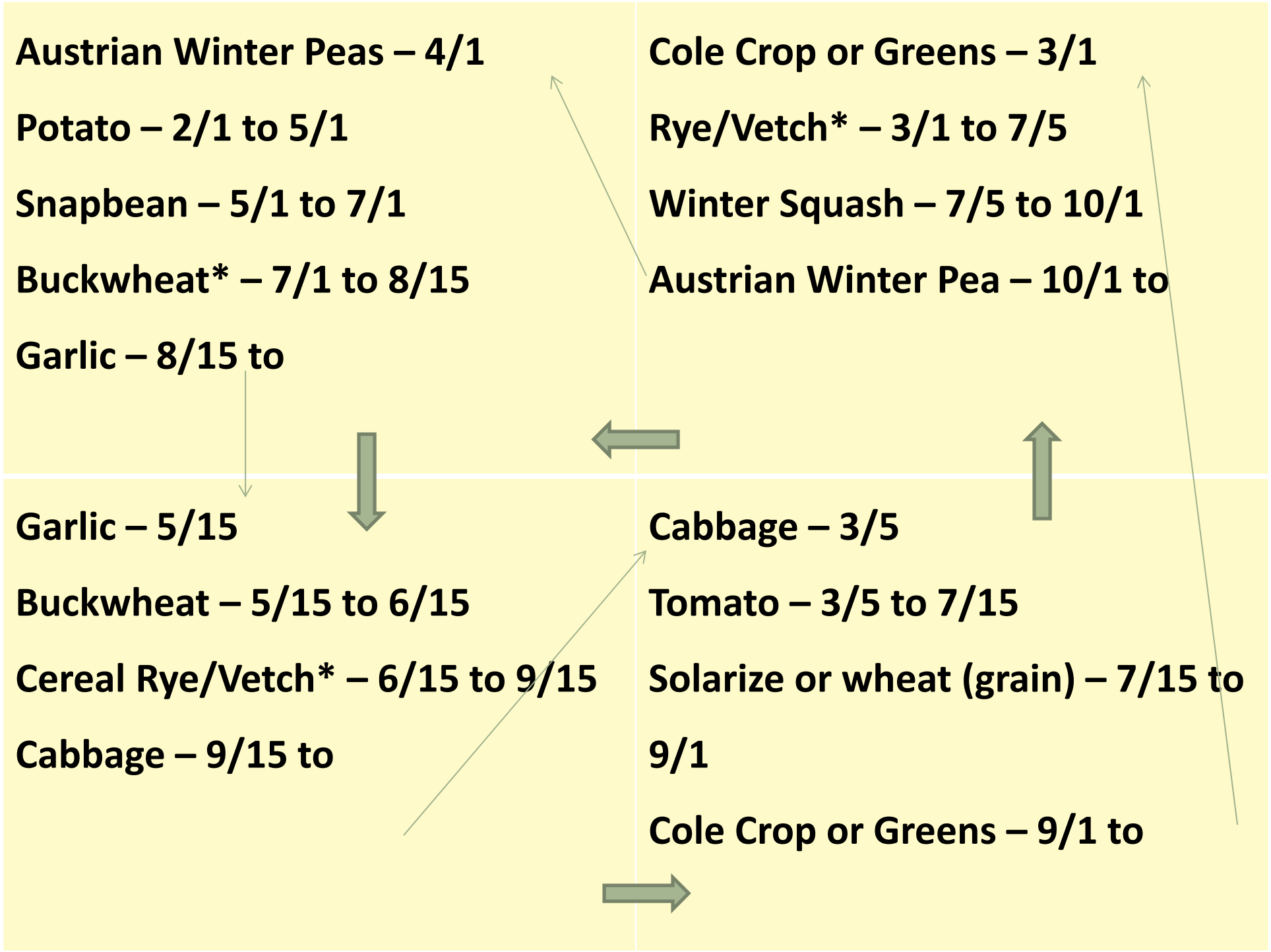
Spring = Bean

Fall = Snow pea

Year 3

Spring = Cantaloupe

Fall = Pumpkin


Austrian Winter Peas – 4/1
Potato – 2/1 to 5/1
Snapbean – 5/1 to 7/1
Buckwheat* – 7/1 to 8/15
Garlic – 8/15 to
Cole Crop or Greens – 3/1
Rye/Vetch* – 3/1 to 7/5
Winter Squash – 7/5 to 10/1
Austrian Winter Pea – 10/1 to
Garlic – 5/15
Buckwheat – 5/15 to 6/15
Cereal Rye/Vetch* – 6/15 to 9/15
Cabbage – 9/15 to
Cabbage – 3/5
Tomato – 3/5 to 7/15
Solarize or wheat (grain) – 7/15 to
9/1
Cole Crop or Greens – 9/1 to

Before-you-plant Practices

Physical

- Use plastic and organic mulch
- Consider staking, caging, and trellising
- Use stem wraps for southern blight control
- Try solarization

Mulching

Mulching

Plastic Mulch

Excessive Weeds

No Weeds

Solarization of a Raised Bed

11-05-2012. 83 days later

Solarized

Non-Solarized

3-12-2013. 210 days later

Solarized

Non-Solarized

Before-you-plant Practices

Biological

- Take advantage of resistant varieties
- Use marigolds for nematode control
- Clandosan or Sincocin can control nematodes

After-Planting Practices

Sanitation

- Remove diseased plants or plant parts
- Do not use tobacco
- Clean equipment
- Cultivate and spray crops when plants are dry
- Avoid ‘dirtying’ plants during cultivation

Conclusion

Growing organically means:

- **Creating Healthy Soils**
- **Choosing the Right Plants**
- **Planting at the Right Time**
- **Controlling pests using cultural, biological and mechanical techniques**

Resources

- **Colorado State Extension –**
  http://cmg.colostate.edu/pubs.html

- **Cornell extension**
  http://vegvariety.cce.cornell.edu/gardeninfo.php

- **Biological Pest Control –**
  http://attra.ncat.org/attra-pub/biorationals/index.php
  http://www.nysaes.cornell.edu/ent/biocontrol/

And of course…

- **Aggie Horticulture**

  http://aggie-horticulture.tamu.edu
  - **Building Raised Beds**
  - **Easy Gardening**
  - **Tomato and Cucurbit Problem Solvers**
- **Grow Green**

  http://www.ci.austin.tx.us/growgreen
- **Plants - Bastrop Planting Guide**

TEXAS CONFERENCE ON ORGANIC PRODUCTION SYSTEMS

ALL THINGS LOCAL

Keynote Speaker
Brad Stufflebeam from Home Sweet Farm
www.homesweetfarm.com
Other Guest Speaker Information Available On Our Website

January 29-30, 2010
Embassy Suites Convention Center
1001 McCarty, San Marcos, TX 78666

register online at WWW.TOFGA.ORG PH. 1-877-766-0006

Organic Fungicides

Trade Name	Diseases Controlled	Labeled Crops
AgriPhage	Bacterial	Tomato, pepper
Root Shield	Soilborne plant diseases	Eggplant, pepper, tomato, leafy vegetables, and cole crops, also GH
Mycostop	Seed, root, stem rots	Any vegetable, also GH
Serenade	Bacterial, powdery mildew, gray mold, early blight, fireblight	Any vegetable, also GH
Contans	Sclerotinia diseases	Green and lima bean, also GH

Trade Name	Diseases Controlled	Labeled Crops
Actinovate	Soilborne diseases, powdery mildew, Alternaria and gray mold	Any vegetable, also GH
SoilGard	Pythium and Rhizoctonia root diseases	Any vegetable, also GH
Oxidate	Many root and foliar fungal diseases	Any vegetable, also GH
Trilogy	Foliar fungal diseases	Any vegetable, also GH

Bordeaux Mixture

- Controls common fungus and bacterial blights and leaf spots on vegetable crops
- Formulation: 4 lb copper sulfate + 4 lb lime + 50 gallons of water
- To prepare 1 gallon of a 4 : 4 : 50 Bordeaux mixture:
  - Mix well 2 tablespoons of copper sulfate in 1 pt of water
  - Mix well 3 tablespoons of hydrated lime in 1 pt of water
  - Filter when pouring into a 1 gallon container
  - Add 3 qt of water (total volume of 1 gallon)

Organic Practices

for

Insect Control

Insect Control

- **Promote beneficial insect populations**
- **Row covers**
- **Trap crops**
- **Planting date**
- **Intercropping/Crop diversity**
- **Sanitation**

And if that doesn't work…

- **Water**
- ***Bacillus thurengiensis (Bt)***
- **Insecticidal Soaps**
- **Neem oil (Azadirachtin)**
- **Spinosad**

- Choose crops that have relatively few insect pests
- Grow crops at a time of year when the insect pests they do have are least abundant
- When possible, choose varieties that are resistant to key pests
- Practice crop rotation
- Avoid growing successive plantings of the same crop near each other, especially if the crop is attacked by serious insect pests that have multiple generations per year
- Think about where you plant a crop relation to other crops, including crops on neighboring farms

- Destroy old crop residue as soon as possible after the final harvest
- Know when to quit on a crop
- Plant into weed-free fields and maintain good weed control
- Know which pests are likely to occur on the crops you are growing and understand the biology of these pests
- Use trap crops when feasible
- Use metalized reflective plastic mulches to reduce early season infestations of pests such as thrips, aphids, and whiteflies

Don’t Work with Viral Tomatoes

Trap Crops

- White eggplant strongly attracts Colorado potato beetle, protecting tomato plants
- Collards attracts diamondback moth, protecting cabbage
- Dill repels tomato hornworm, protecting tomato
- Beans and other legumes, attract leafhoppers, leaf beetles, stalk borer and fall armyworm and protect sweet corn

- Use physical exclusion methods when feasible
- Monitor pest populations
- Use mating disruption when available and appropriate
- Use mechanical controls where feasible
- Keep records, keep learning, and use what you learn in the next crop

Organic Insecticides

Spinosad

- Effective against thrips, leaf miners, and most caterpillar pests.
- Entrust is an organic formulation of spinosad formulated for commercial use.
- Justice and Greenlight Fire Ant Bait with Conserve are granular baits containing spinosad that are approved for fire ant control in organic crops.

Bt (*Bacillus thuringiensis)*

- Different strains of Bts.
- Some only control caterpillar pests (*Bt kurstaki* and *Bt aizawai*), while others only work on mosquito larvae (*Bt israelensis*) or beetles (*Bt tenebrionis*).
- Generally slow-acting and have to be eaten by the caterpillar in order to work.
- Because of their relatively slow activity, Bts are best used when caterpillars are small.
- Organic Products: Javelin, Dipel, Delfin, Deliver, Biobit, and Agree

Neem Oil

- Controls soft-bodied insects, such as aphids, whiteflies, and mites.
- It also helps control certain fungal diseases.
- Organic Products: Trilogy 70% Neem Oil, and Monterey 70% Neem Oil.

Azadirachtin

- A natural insect growth disruptor derived from the seed of the neem tree.
- Effective against sucking insect pests, such as whiteflies and aphids.
- It is slow acting and must be applied when low populations of immature pests are present.
- Organic Products: Neemix, Aza-Direct, and Azatrol.

Beauvaria bassiana

- A fungal disease that infects certain insect pests, especially whiteflies, thrips, aphids, mealy bugs, and certain beetles and caterpillars.
- Slow acting; begin treating when pest populations are low.
- Do not tank-mix with fungicides.
- Organic Products: Mycotrol-O, BotaniGard, and Naturalis L.

Viruses

- Are very species-specific.

Organic Products:

- Spod-X LC for beet armyworms only.
- Gemstar LC for corn earworm/tomato fruitworm and tobacco budworm only.

Parasitic Nematodes

- Some nematodes attack only insects
- Used to control soil-dwelling pests, such as cutworms, squash vine borer, mole crickets, and white grubs.
- Be sure that the species you purchase is active on the pest you need to control, and be sure you know how to handle and apply the nematodes properly
- *Steinernema carpocapsae* and *Heterorhabdtis bacteriophora* for control of cutworms, mole crickets, etc.

Pyrethrin

- A broad-spectrum contact insecticide.
- Short-lived, and many pests may be ‘’knocked down” but recover later.
- Inorganic synergists, such as piperonyl butoxide (PBO), are often mixed with pyrethrin to enhance activity but doesn’t greatly increase residual control.
- Pyrethrin products that contain the inorganic synergist PBO are not organic.
- Pyganic is an organic formulation.

Rotenone + Pyrethrin

- Effective against aphids, stink bugs, beetles and other pests.
- Pyrellin is a commercial insecticide that contains a combination of rotenone and pyrethrin.
- Pyrellin: control pests such as stink bugs, squash bugs, cucumber beetles, vegetable weevils, and other pests. Note that Pyrellin is not currently approved by OMRI

Plant Extract Products

- Garlic spray products that have pest repellent properties.
- Garlic Barrier is one example. Be aware that such products may not be approved for certified organic production.
- Cinnamite is a commercial miticide based on extracts from cinnamon oil. It is not currently OMRI approved and can be phytotoxic to tomatoes and certain other plants

Iron Phosphate

- Sluggo: a slug or snail bait that contains iron phosphate and is approved for organic production.

Horticultural oils

- For control of soft-bodied pests, such as aphids, spider mites, and whiteflies.
- Most of them are not approved for organic production because of the emulsifiers (additives) are not organic.
- BVA Spray 10 and Organic JMS Stylet-oil are two examples of organic emulsifiers.

Vegetable Oils and Fish Oils

- Effective against soft-bodied insects, such as aphids, mites, and whiteflies.
- Golden Pest Spray Oil - derived from soybeans
- Vegol Year-Round Spray Oil - derived from canola seed
- Organocide – combination of fish oil and sesame oil.
- Such oils may or may not be approved for certified organic production.

Insecticidal Soaps

- Control soft-bodied insects, such as aphids, spider mites, and whiteflies
- Can cause foliage injury.
- Be aware that chain length has a big effect on the phytotoxicity of fatty acids. Some short chain fatty acids are actually used as herbicides. This is one reason it is not a good idea to use commercial soaps as insecticides.
- If you want to use soaps to control insect pests, stick with labeled insecticidal soaps: M-Pede and Safer Insect Killing Soap Concentrate

Sulfur

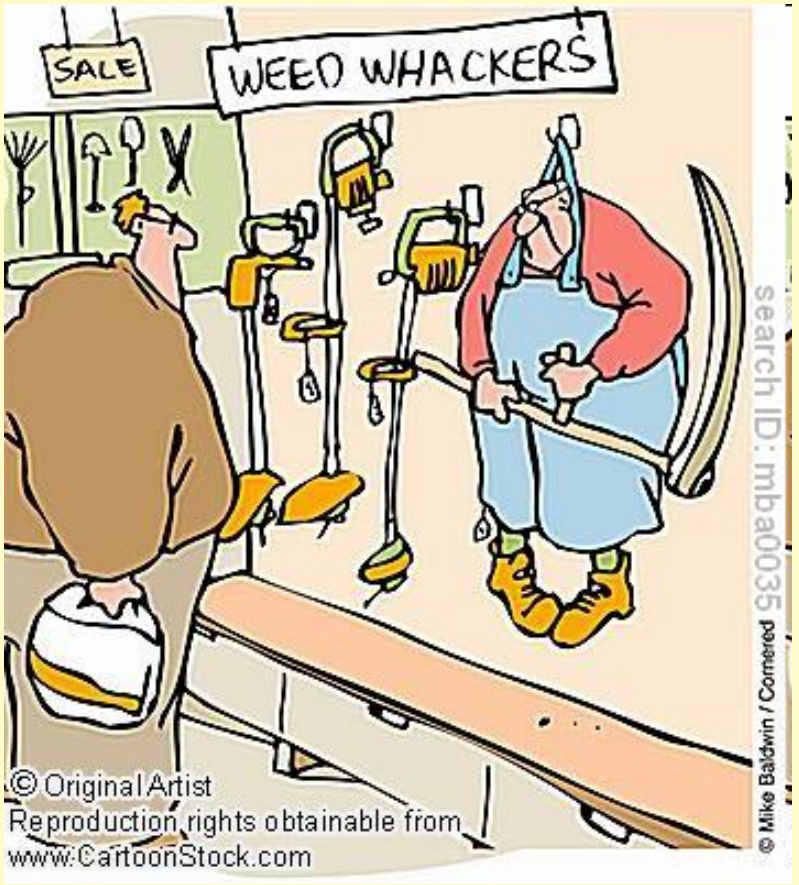
- Elemental sulfur has long been used for control of spider mites and certain plant diseases and is approved for organic production.
- Organic gardeners primarily use microfine sulfur dust formulated for application as a liquid spray.
- Sulfur can cause skin and eye irritation and can cause plant injury if improperly used, especially if applied in combination with oils, or if applied within several weeks of an oil treatment.
- Thiolux, Microsul, and Sulfur DF are examples.

Kaolin Clay

- Finely ground kaolin clay is sometimes applied to crops to help reduce heat stress or prevent sunburn on fruit of crops like tomatoes and peppers.
- It is applied as a foliar spray at relatively high rates, around 25 lbs per acre, and dries to form a fine coating of clay particles that reflect sunlight.
- This coating of clay also helps suppress feeding by certain insect pests, such as cucumber beetles, flea beetles, thrips, and grasshoppers.
- Surround WP (95 percent kaolin clay) is OMRI approved

Weed Control

- **Cover cropping**
- **Mulching**
- **Smother cropping**
- **Mowing**
- **Cultivating/Hoeing**
- **Flaming**



Organic Herbicides

Corn Gluten Meal

- Examples: Orland's Safe-T-Weed, Corn Weed Blocker
- Preemergent herbicide that kills feeder roots of germinating seeds but does not harm established plants that already have true leaves.
- Has high N content (9-1-0) so it works also as a fertilizer

Weed Barriers

- Examples:
  - WeedGuardPlus - Biodegradable weed barrier
- Newspapers
- Cardboard
- Garden fabric weed barrier, example: Sunblet Weed Fabric - non-biodegradable

Postemergent Herbicides

- Examples:
  - Avenger Weed Killer
  - GreenMatch EX burndown herbicide
  - WeedZap
  - 20% vinegar
  - BurnOut II
- Contain citrus oil, clove oil, cinnamon oil, d-limonene, vinegar oil, etc.

Mechanical Weed Control

- Hoeing: a lost art as people become more dependent on chemical products. Hoeing is best done with a sharp hoe when weeds are 1” tall. At that stage, disturbing the soil surface with the sharp hoe with forward and backward movements is enough to uproot all weeds
- Glaser Weed Hoes

Flamer

- 400,000 btu. Best for weeding row crops, perennials, trees and vines. and sidewalks

Mechanical

- Hoeing: best done with a sharp hoe when weeds are 1” tall. At that stage, disturbing the soil surface with the sharp hoe with forward and backward movements is enough to uproot all weeds
- Tools for perennial weeds:
  - Fiskars Uproot Weeder and Root Remover
  - Grampa’s Weeder

Most Importantly

- Don’t forget ‘mulching’
- Plastic mulch is approved for organic production
- Biodegradable mulch is available:
  - Coco fiber weed mat
  - Mega Mulch compressed brick
  - Planters Mulching Paper
  - Cocoa Peat
  - Cocoa mulch


All Seasons®
Horticultural & Dormant Spray Oil
Concentrate
TRUSTED SINCE 1926
BONIDE®
FOR ORGANIC GARDENING
Kills insects by smothering
This product is intended for small garden use only
Use on listed fruits, vegetables, shade trees, evergreens, ornamentals flowers and houseplants
ACTIVE INGREDIENT
Petroleum Oil (Superior type U.R. Min. 92%) ... 98.00%
OTHER INGREDIENTS ... 2.00%
TOTAL ... 100.00%
EPA Est. No. 4-NY-1
EPA Reg No. 4-80
Kills troublesome insects such as scale, fungus gnats, aphids, whiteflies, mites, thrips, mealybugs and leafminers
Keep Out Of Reach Of Children
CAUTION (See Back Panel for Additional Precautionary Statements and First Aid)
Net Contents 32 FL. OZ. (946 ML.)
Kills all stages of insects including eggs


Kills Insects
GREEN LIGHT®
CONCENTRATE
Makes Up To 8 GALLONS
Lawn & Garden Spray with SPINOSAD®
For Residential Use In Home Gardens, Lawns and Ornamentals
OMRI Listed
Organic Materials Review Institute
ACTIVE INGREDIENT:
Spinosad (a mixture of spinosyn A and spinosyn D) ... 0.5%
OTHER INGREDIENTS ... 99.5%
TOTAL 100.0%
Contains 0.04 lbs. of active ingredient per gallon
KEEP OUT OF REACH OF CHILDREN
CAUTION See Booklet For Additional Precautionary Statements.
MANTÉNGALO FUERA DEL ALCANCE DE LOS NIÑOS
PRECAUCIÓN Vea en folleto las precauciones adicionales.
Form 7034-A 41116
Net Contents 16 FL OZ (1 PT) 474 ml


12328
PRODUCERS
SINCOCIN 32 OZ
EA 21.99
SINCOCIN
BIOLOGICALLY DERIVED AGENT
FOR CONTROL OF NEMATODES
AND ASSOCIATED PATHOGENS
For Residential Use Only
Ingredients
Active Ingredient:
Plant Extract* 0.56%
Other Ingredient: 99.44%
Total 100.00%
*The plant extract is derived from Quercus falcata, Opuntia lindheimeri, Rhus aromatica, and Rhizophoria mangle tissues
Keep out of reach of children
CAUTION
See Side Panel for First Aid
Manufactured by:
Agriculture Sciences, Inc.
3227 Garden Brook
Dallas, TX 75234
EPA Reg. No. 59174-2
EPA Est. No. 59174-TX-1
Tel: 972-243-8930
NET CONTENTS:
32 Ounces


GREEN LIGHT
CONCENTRATE
Makes Up To
32 GALLONS
BT Worm Killer
Controls Certain Leaf-Chewing Worms
Use on Vegetables, Fruits,
Shade Trees and
Ornamentals
ACTIVE INGREDIENT:
Bacillus thuringiensis subspecies Kurstaki
solids, spores and insecticidal toxins... 15.0%
OTHER INGREDIENTS 85.0%
TOTAL 100.0%
The percent active ingredient does not indicate product performance and potency measurements are not federally standardized.
KEEP OUT OF REACH OF CHILDREN
CAUTION See Booklet For Additional Precautionary Statements
Net Contents 16 FL OZ (1 PT) 474 ml
Biological Insecticide
27316
Form 7043-A


LADY BUG
BRAND
JOHN'S
RECIPE
FERTILIZER
3–1.5–2
QUART


Medina
Since 1962
20 Million Acres
of Proven Performance
Liquid Seaweed
0-0-1 MEDINA LIQUID SEAWEED
Helps germination and root development
Improves Yield and Quality Covers 16,000 Sq. Ft.
GUARANTEED ANALYSIS
Soluble Potash (K2O) 1.0%
Derived from Ascophyllum nodosum seaweed,
Humic and fulvic acids.
ONE QUART (946 ml) NET WEIGHT 2.16 LBS. (.978 Kg)
Un cuarto de galón (946 ml) Peso Neto 2.16 lbs. (.979 Kg)


All-Natural Plant-Based Formula
Miracle-Gro
ORGANIC CHOICE
ALL PURPOSE
PLANT FOOD CONCENTRATE
For Indoor & Outdoor Plants
• Grow big, more beautiful plants...naturally
• Natural source of nitrogen begins feeding your plants immediately
• Feeds all types of flowers, vegetables, trees and shrubs
NET CONTENTS/CONTENIDO NETO
1 QT (32 FL OZ) 946 ml


ferti·lome
Dipel®
Dust
3.98
Biologic
Insecti
Sq. Ft.
Tomato Hornworms,
Armyworms,
Gypsy Moth Larvae,
Loopers, Tent
And Other Listed Worms.
Shrubs, Lawns And

Conclusion

Growing organically means:

- **Creating Healthy Soils**
- **Choosing the Right Plants**
- **Planting at the Right Time**
- **Controlling pests using cultural, biological and mechanical techniques**

Resources

- **Colorado State Extension –**
  http://cmg.colostate.edu/pubs.html

- **Cornell extension**
  http://vegvariety.cce.cornell.edu/gardeninfo.php

- **Biological Pest Control –**
  http://attra.ncat.org/attra-pub/biorationals/index.php
  http://www.nysaes.cornell.edu/ent/biocontrol/

And of course…

- **Aggie Horticulture**

  http://aggie-horticulture.tamu.edu
  - **Building Raised Beds**
  - **Easy Gardening**
  - **Tomato and Cucurbit Problem Solvers**
- **Grow Green**

  http://www.ci.austin.tx.us/growgreen
- **Plants - Bastrop Planting Guide**