

Establishing a Healthy Garden

1) Don't fight your site!

- Test soil
- Watch for sun exposure patterns
- Put plants where they will be happy

2) Focus on the soil

- Test soil
- Enrich the soil before you plant
- Till the soil as little as possible
- Side dress established plants with compost or composted manure
- Don't leave the soil uncovered - erosion can wash away nutrients and weed seed can take hold
- Know how your soil drains

3) Know your soil pH

- Soil pH is a measure of the acidity and is a primary factor in plant growth
- If your soil pH is too high or too low, your plants will not be able to access some nutrients, even if they are present in the soil
- It takes time to alter soil pH and your soil will tend to revert to its old pH over time, making it necessary to repeated treatment. Examples: Don't just throw lime on your lawn every year out of habit

4) Understand nutrients

- There is no one size fits all fertilizer
- Fertilizer choice depends on the type of plant being grown and the soil it is being grown in
- Always follow the label instructions when using any registered garden product
- **KNOW WHAT YOUR PLANTS NEED!** For instance blood meal (12-0-0) can be used as source of nitrogen without phosphorus or potassium, which may not be needed

Macronutrients-

Nitrogen (N) FOLIAGE

- Stimulates green leafy growth (lawns)
- Is the nutrient that depletes fastest (especially in lawns)
- Is also water soluble and can wash out of the soil rather quickly
- Deficiency symptoms include small leaves, yellowing or short thin growth

Phosphorus (P) ROOTS AND FLOWERS

- Encourages strong root formation and maturity.
- Helps with setting flower buds and seed formation
- Increased disease resistance
- Phosphorus availability depends on soil temperatures, pH range, and the soil levels of other nutrients (such as calcium and potassium)
- Deficiency symptoms: plants are stunted, with dark green foliage, followed by reddening of the stems and leaves. Reduced fruit or seed production.
- Very dependent on pH range

Potassium (K) (Sometimes called potash) OVERALL PLANT HEALTH

- Potassium contributes to the overall health and vigor of plants and promotes bloom
- Regulates plant uptake of nutrients
- Helps plants with cold hardiness, drought tolerance & disease resistance
- Deficiency symptoms: Older leaves may look scorched around the edges and/or wilted, irregular growth. Plant roots are not well formed, and they have weak stems and stalks.

5) Add organic matter

- Application of organic matter can increase plant growth by 20 to 100%

6) Careful plant selection Choose healthy and disease-resistant plants

- Avoid a plant "in bloom"
- Inspect foliage and stems
- Check roots

7) Put down the sprayer-Know if it's an insect or a disease

Insect control & Disease control-

- Maintain healthy fertile soil, rich in organic matter, with balanced nutrients, pH, and trace elements
- Be on the lookout to detect and identify diseases as early as possible
- Plant disease-resistant species and varieties and choose plants appropriate for your site
- Avoid monocultures
- Carefully check for symptoms and signs of disease on nursery stock before buying
- Use adequate spacing
- Practice good sanitation practices
- Avoid over-fertilization, especially with nitrogen.

8) Establish a regular maintenance routine

- **Deadheading**
- **Pinch**
- **Support**
- **Inspect your plants for problems**
- **Divide-** Your plants will tell you when it's time to divide
- **Prune-** Your plants will tell you how they want to be pruned
- **Fertilize:** Supplement your fertile soil with composted manure in the spring, and feed again, if needed, in midsummer with a mild complete fertilizer, such as fish emulsion
- **Water**
- **Mulch**
- **Weed**

Garden Maintenance Schedule

January

Plan

February

Clean tools

Prune/Inspect Trees

Ice and snow damage

March

Plant

- Do not ever work wet soils as it may ruin the soil structure.

Prune

- Complete pruning of shrubs and ornamental trees before growth starts
- Prune spring-blooming shrubs/trees as soon as they finish flowering
- Remove dead/damaged leaves on perennials such as Hellebores and Heuchera

- Remove winter mulch, lightly cultivate soil if thawed
- If plants were not cut back last fall, do so now before they begin to grow.
- Check to see if there are any plants that have heaved out of the ground during the winter and replant
- Rake out the lawn (if the ground is sufficiently dry)

Insect control

- Begin horticultural oil applications where needed to control pests
- Look for and destroy caterpillar tents

April

Plant

- Perennials, fall-blooming bulbs, trees, roses, shrubs, vines
- Summer bulbs-to extend blooming period of summer bulbs, plant early, middle and late season selections each week until the middle of June

Deadhead

Pinch

- Back perennials that you'd like to be bushier such as hardy mums and sedum. Remove growing tip when the stems reach 6 inches long. Each time the shoots reach 6 inches in length, pinch them off.

Support

- Install stakes for plants and hoops in place for peonies

Divide

- As soon as you can see new growth starting, it is a clue to do any division or transplanting
- Thin plants where needed

Prune

- Clean up winter damage/dead branches
- Prune flowering shrubs when they finish blooming.
- Most trees, such as maples, birch, honey locust, and beech may be pruned in late spring or summer
- Avoid pruning oaks from April- July because they are very susceptible to oak wilt
- Remove the old stalks from ornamental grasses before new growth begins

Fertilize

- Perform a soil test and amend your soil if needed
- Add a top dressing of compost and work the soil using soil amendments where needed
- Fertilize annuals and biennials before planting- broadcast a 5-10-5 and mix into the soil
- Fertilize perennials before planting (broadcast into soil) and after one or two years when plants are established as growth begins in the spring. Fertilize again every third year *if needed*.

Water

Mulch

Weed

Insect and disease control

- Insecticidal soap -aphids can appear early
- Apply horticultural oil
- Caterpillars- Remove tent caterpillars and webs
- Install bat houses bats can be an effective way to control insects. One big brown bat can eat 3,000 to 7,000 insects each night **www.batconservation.org**
- Dragonflies can consume 300 insects a day

May

Plant

- Perennials and annuals and fill outdoor containers (annuals after threat of frost), fall-blooming bulbs, ground covers, roses, trees, shrubs and vines
- Toward the end of the month summer bulbs (rhizomes, tubers, corms, and tuberous roots) can be

Deadhead

- Daffodils, hyacinths, and other spring flowering bulbs as the flowers fade

Pinch

- Pinch all shoots of the fall mums, tall sedum and some of the taller Asters
- Pinch annuals to produce more blooms.

Support

- Stake tall perennials before they get more than about 2 feet tall.

Divide

- Crowded winter and spring-blooming bulbs after leaves yellow

Prune

- Evergreens when the new growth starts to turn a darker shade of green
- Cut out all suckers sprouting from the bases on grafted shade and fruit trees
- Continue pruning spring-flowering shrubs as they finish blooming

Fertilize

- Add compost and other amendments where needed
- Start fertilizing annuals every other week with a water soluble fertilizer (such as Green Light “Super Bloom” 12-55-6) for maximum flower production

Water

Mulch

- Mulch gardens to limit weeds (Do not mulch near peonies or bearded iris)

Weed

Insect and disease control

- Insecticidal soap- continue to treat aphids, spider mites, and white flies
- Horticultural oil - spray to trees, shrubs and vines if needed
- Apply slug controls- if you get them early, they don't reproduce
 - Diatomaceous earth is a remarkable, all-natural product made from tiny fossilized water plants 100% Organic. There is no environmental hazard. If possible, buy *natural* diatomaceous earth, which is mined, ground and sifted. The swimming pool grade contains crystalline silica, a respiratory hazard.
- Look out for fungal infections- Look for and control blackspot and powdery mildew

June

Plant

- Finish planting before the summer heat (best by mid-June)
- Continue to plant summer bulbs

Deadhead

- Deadhead or cut back Spring-flowering perennials after they bloom
- Deadhead to extend bloom of most annuals
- Thin out perennials to promote aeration where necessary

Pinch

- Pinch or cut back for height control
- Continue pinching flowers such as dahlias and begonias to force branching, more blooms and fuller plants.

Support

- Continue to stake perennials where needed

Divide

- Divide and transplant perennials-keep watered
- Mid to late June is an excellent time to take softwood cuttings of shrubs to start new plants (such as spirea, lilac and viburnum)

Prune

- Continue pruning spring-flowering shrubs when they are done blooming
- Continue with major pruning of shade trees, except oak

Fertilize

- Continue fertilizing annuals every other week
- Continue to apply soil amendments

Water

- Continuously water all new plantings

Mulch

- Finish mulching but keep extra mulch for new plantings and freshen up areas as needed

Weed

Insect and Disease Control

- Continue with Insecticidal soap and Horticultural oil as needed
- Keep garden clean
- Keep checking for slugs
- Watch for and control blackspot and powdery mildew

July

Plant

- Limit planting and if you do, make sure and keep up with watering.

Deadhead

- Keep deadheading!!!
- Cut back delphinium and spring blooming phlox to encourage a second flowering

Pinch

- Complete pinching of fall blooming plants by 4th of July
- Trim annuals where needed
- Remove the faded blooms of bulbs, corms, rhizomes and tubers - some plants will try to make seeds and it is more important for them to replenish the bulbs for next year

Fertilize

- Continue to fertilize annuals every-other week take care not to fertilize in the heat of the day
- Do not fertilize shrubs or trees during the summer as it may interfere with the onset of dormancy. Most of them have finished their growth for the year and fertilizer will force new growth which may result in injury next winter

Water

- Water newly planted trees and plants as necessary. Note: A garden needs one inch of water each week from April to September. Early morning is the best time to water, evening watering is less desirable because plant leaves that remain wet through the night are more susceptible to fungus diseases.

Mulch

Weed

Insect and disease control

- Continue to use insecticidal soap to treat aphids, spider mites, and white flies
- Keep checking for slugs during rainy periods
- Watch for and control blackspot and powdery mildew.
- Japanese beetles appear now- picking them off the plant works best.

August

Plant

- Limit planting and if you do, make sure and keep up with watering
- Start planing/ordering spring-flowering bulbs
- Avoid planting trees in August - wait until the fall planting season

Deadhead

- Keep deadheading
- There could be many plants that need to be cut back

Divide

- Divide or transplant poppies, bearded iris and peonies now-when plants are dormant.

Prune

- Prune summer-blooming shrubs after flowers finish

Fertilize

- Continue to fertilize annuals every-other week take care not to fertilize in the heat of the day
- Do not fertilize perennials- allow plants to finish the summer growth cycle in a normal manner.
- Do not fertilize trees until they have lost their leaves in the fall

Water

- Continue to water new plantings

Mulch

Weed

Insect and Disease Control

- Continue with insecticidal soap when needed to control aphids, mites, thrips and whiteflies
- Keep checking for slugs during rainy periods
- Watch for and control blackspot and powdery mildew
- Continue to pick off Japanese beetles

September

Plant

- Perennials and almost all deciduous shrubs (Rhododendrons are best planted in spring)
- Plant peonies now, but make sure the crowns are buried only one and a half to two inches below ground level as planting them deeper than two inches may keep them from blooming
- Plant spring flowering bulbs
- winter-hardy pansies and fall annuals

Deadhead

- Deadhead plants to keep flower buds forming through the fall

Divide

- Continue to divide or transplant poppies, bearded iris and peonies

Prune

- Avoid pruning trees and bushes because the new, soft growth will not harden and survive the winter

Fertilize

- Bone meal is an organic fertilizer that is derived from the meat processing industry. Phosphates do not easily pass through soil, so mixing the bone meal with the soil or putting it in the planting hole can help
- Bone Meal provides a natural source of nitrogen and phosphorous for bulbs, peonies, ivy, iris and ferns

Water

- Water trees and shrubs when rainfall is scarce to "winterize" them

Weed

Insect and Disease Control

- Continue insecticidal soap as needed to treat aphids, spider mites, and white flies
- Keep checking for slugs as they become active again
- Watch for and control blackspot and powdery mildew

October

Plant

- Fall is planting time for trees, shrubs and shrub roses- finish planting by early October
- Plant winter and spring flowering bulbs

Divide

- Divide and replant crowded fall-blooming bulbs after leaves yellow

Prune

- Avoid pruning trees and bushes

Fertilize

- Test soil - Fall is an excellent time to have your soil tested
- If you need to raise or lower the pH of your soil, add the required amendments, such as sulfur or lime, in the fall because they take some time to work

Start fall clean up

- Leave some perennials for winter interest/health
- Discard annuals after a killing frost
- Start raking and composting leaves
- Move in plants you want to have indoors before the first frost- treat for insects with insecticidal soap before you take plants inside

- Dig up and bring in summer bulbs such as cannas, dahlias and gladiolus. Store in a place that is cool (temperatures should be around 45 degrees Fahrenheit) dry and safe from rodents
- Protect roses for winter
- Spray an anti-transparent such as Wilt Pruf® -Wilt pruf is a natural pine oil emulsion that is non-hazardous, organic and biodegradable which guards against moisture loss

Insect and Disease Control

- Clean up any diseased debris and discard

November

Plant

- Finish planting winter and spring flowering bulbs

Deadhead

- Be selective about which perennials (digitalis vs. phlox)

Prune

- Avoid pruning trees and bushes

Fertilize

- Finish amending the soil.

Water

- Keep watering, as needed, until the ground temperature reaches 40 degrees F.

Mulch

- If you apply winter mulch, do so after ground has frozen, otherwise you'll provide a great home for voles

Continue Fall Clean up

- Keep leaves off the lawn
- Turn pots over for winter
- Remove all diseased plant debris around any plant
- Drain and roll up all hoses and soakers
- Make a list of tools which are missing or broken, materials that you ran out of, tool wish list and so on
- Update journal

December

Pour yourself a nice glass of wine and thumb through your new Catalogs!!!

Organic materials reviewed www.omri.org

GENERAL GARDENING

Find out about anything!

www.about.com

Covers several topics from pruning to fertilizer

http://extension.unh.edu/resources/category/Home_and_Garden#49

PRUNING/DIVIDING

Suggested Perennial Plants to Prune in the Spring

http://gardening.about.com/od/maintenance/a/Spring_Pruning.htm

Perennial Plants to Prune in the Fall

http://gardening.about.com/od/maintenance/a/Fall_Pruning.htm

Pruning and pinching

<http://gardening.about.com/od/gardenprimer/ss/GardenMaint.htm>

Pruning trees and shrubs

<http://gardening.about.com/od/treesshrubs/a/PruneTreeShrubs.htm>

Pruning ornamental shrubs:

<http://extension.missouri.edu/xplor/agguides/hort/g06870.htm>

Best time to divide perennials:

<http://www.gardengatemagazine.com/extras/pdf/60dividing.pdf>

WORMS

www.unclejimswormfarm.com

www.wormsway.com

www.wormwoman.com

ORGANICS

Natural Garden Pest Control

www.eartheasy.com

www.safelawns.com

How to translate a Non-Organic Soil Test for Organic Gardening

<http://faq.gardenweb.com/faq/lists/organic/2002084318025285.html>

SOIL AND NUTRIENTS

Soil

<http://gardening.about.com/od/soil/a/GardenSoil.htm>

Soil testing

<http://www.css.msu.edu/SoilTesting.cfm>

Lime

<http://www.ext.vt.edu/departments/envirohort/factsheets2/lawn/sep94pr2.html>

How to translate a Non-Organic Soil Test for Organic Gardening

<http://faq.gardenweb.com/faq/lists/organic/2002084318025285.html>