Questions People are asking…

• Are we talking about reducing household and landscape water usage?

Water conservation for the entire household, inside and out, is always good practice: it saves money and one of the planet’s most precious natural resources. The Environmental Protection Agency has determined that landscape irrigation accounts for more than 30% of all residential water use and that as much 50% of outdoor water is wasted due to inefficient watering methods. Significant savings in outdoor water usage could be achieved with proper garden design, plant selection/care, soil management, and irrigation practices.

Water conservation is even more important in years with little rainfall. California and Marin County are facing the dryest year on record. The current drought, which followed dry seasons in 2011 and 2012, may turn out to be the worst ever. Governor Brown has declared a statewide drought emergency and has asked residents to voluntarily reduce water usage by 25%. Marin Municipal Water District has asked its customers for a voluntary reduction of 25%. In Spring 2014, depending upon reservoir reserves, Marin’s multiple water districts will determine if mandatory water restrictions are necessary.

• Should I even plant an edible garden this year?

That depends upon a number of factors: how deep the restrictions might go, how many existing plants you want to maintain in your landscape and how much you reduce your indoor water use. After review of your water bills for the past few years, and a few calculations, you can determine how much water you have available for an edible garden this year. If you have an excess allocation after household use and after watering key plants in your existing landscape, you will be able to plant an appropriately sized edible garden.

Most vegetable crops require one inch or more of water each week during the growing season—this equals about ½ gallon of water per plant. In hot, dry conditions vegetables may demand more water. Even so, growing food at home is more water efficient than growing food commercially. So, if you grow a food garden, you may be using more water from your personal hose bib, but you are using less water than it would take to purchase the same food at the market.

Home edible gardens contribute to sustainability of the planet. The challenge for home gardeners is to learn to be as water efficient as possible, not just in the garden but, everywhere in the home. Reducing water consumption, harvesting water and or using graywater to improve ornamental landscapes are tested strategies we can employ in our homes so that we can save water and have an edible garden too.

Reducing Water Use in Your Edible Garden

33 things you can do to save water this year.

CONSIDER DESIGN

1. Grow only what you need.
2. Locate garden away from prevailing winds. Use fences or tall plants as windbreaks.
3. Group crops with similar water, soil, and sun needs into ‘hydrozones.’
4. Group crops with similar root depths deep rooted crops such as asparagus and artichokes (root 4’+); medium rooted crops such as summer squash and cucumber (root 3’+); and shallow rooted crops such as spinach, kale and lettuce.
5. Lay out in blocks, not rows, to shade roots and reduces evaporation.
6. Plan a spring garden with edibles that use residual water in the soil. Separates, Brussels, Pea, etc.
7. Plan to use edibles that mature quickly—60-60 days: Enorme Runner Beans, Chard, Lamento Cucumber, Early Girl, Supers, and Sanglant tomatoes, etc.
8. Grow high producers: Chard, Salad Greens, Curled Kale, Arugula, Studio Summer Squash, etc.
9. Choose drought tolerant vegetables, fruit and herbs: Sorrel, Blackberries, Rosemary, etc.
10. Incorporate drought tolerant native edibles like Elderberry, Golden Currant, etc.
11. Choose seed and mini cultivars that use less water: Lamsin, Apples, Fig, etc.
12. Use advanced tactics: reservoirs and basins for passive water collection, rainwater capture, graywater, and hydrotops.

CONSIDER PLANT CARE

13. Care for your most valuable plantings first: usually mature fruit trees, shrubs and Heritage potatoes.
14. Water when needed. Cool soil moisture with finger or moisture meter. Irrigate when dry 2-4 deep.
15. Fertilize less.
16. Control weeds, as they compete with edibles for water.
17. Thin plants on time. Thin seedlings when they are 1-2” tall. Trim unneeded seedlings at soil level: Thin fruit trees when fruit is young.
18. Harvest crops on time. Take crops at peak of growth and flavor.
19. Know the signs of water and heat stress: wilting foliage, curled or yellow leaves and sunburned edges.
20. Water according to need: young and shallow rooted plants need frequent, shallow water; flowering and fruiting plants need less frequent, but deeper water.

CONSIDER THE SOIL

21. Know the soil in your garden, its texture and water holding capacity.
22. Before planting, double dig the garden to loosen soil.
23. Incorporate organic compost to increase water holding capacity of the soil.
24. Mulch on top of soil to reduce water needs up to 50%. Mulching reduces evaporation, moderates soil temperature, insulates root, suppresses weeds, reduces soil compaction and prevents erosion.

CONSIDER IRRIGATION

25. Repair leaks and check regularly for new leaks.
26. Irrigate in the morning when temps are cool but minig.
27. Water deeply and less frequently.
28. Water according to plant needs and soil type.
29. Apply water directly to the base of plants, under mulch.
30. Avoid overtop and runoff.
31. Use low-volume drip irrigation.
32. Use emitter lines for closely spaced plants. Use individual emitters for widely spaced plants.
33. Install a WaterSense labeled smart irrigation timer. (And get a rebate from your water district.)
How can I grow edibles with less water?

Here are four basic concepts for growing a water efficient edible garden:

1. Grow a smaller garden.
2. Grow edibles that need less water including:
   - Plants that use residual moisture in spring soil
   - Plants that mature quickly
   - Drought tolerant plants
3. Compost and mulch
4. Irrigate more efficiently:
   - Fix leaks
   - Water early in the morning
   - Avoid overspray
   - Use a smart irrigation controller

What are the most water efficient edible plants?

Favorite water efficient edibles from Master Gardener Steve Albert:

- Amaranth (green leaves and as vegetables)
- Garbanzo Bean (chickpea) tuscan
- Bean (Visit): dry bean, turn, nutritious
- Black-eyed Pea, a.k.a. cowpea, salad, soup
- Bean Yard-long Aquaponics: long, crunchy
- Chard: grows in cool weather conditions
- Black Amoe Corn: most black kernels
- Eggplant: raw, roast, fry or bake
- Mustard Greens: tangy, spicy salad green
- Parsley: use as a salad green
- New Zealand Spinach: grows in spring
- Pearson Tomato: meaty, juicy
- Super Roma Tomato: good for sauces
- Golden Nugget Tomato: great for salads

Rick Flores from UCSC Arboretum recommends drought tolerant native edibles:

- Blue Elderberry: Johnson’s Mixure
- California Bunch Nut: Caryota sp. Califonia
- Thinskiberry: Ribes gomphothalos
- Huckleberry: Vaccinium stamine
- Golden Current: Ribes aureum
- California Wild Grape: Vitis californica
- Santa Greenberry: R. mojave
- Native Strawberries: Fragaria chilona
- Yerba Buena: Eriobotrya douglasii

*The watering of a garden requires much judgment as the meaning of a soup.*

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