# WaterWise for a Community Garden

In our area, vegetable gardens need to be watered through the heat of the summer. Plants need a steady supply of moisture to produce crops. But plants also need to breathe; they can suffocate if kept constantly wet. The real trick is keeping your garden properly watered – not too dry and not too wet. Not at the surface, but down by the roots.

Test: Check for moisture down in the root zone 3-4 inches deep. Poke a hole, cut a divot or stick your finger that deep to see if there's moisture for the roots. <u>BEST TOOL: Soil Moisture Meter!</u>

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| Wilted from heat | Wilted from too much water | Wilted from pot-bound roots |
| NOTE: Folded down leaves means plant stress – BUT that stress can be too little water, too much water, too much heat, bad root conditions, or even disease or insect damage. You need more information to know what to change. | | |

## The Plan:

### 1. Improve the soil

Feed the soil and it will feed the plants. Sandy soils drain fast; clay soils resist absorption. The solution is the same – add organic materials. Compost, mulch, chopped up plants, composted manure, etc. worked into the soil all improve water penetration and retention. Add organic matter regularly to improve texture and water-holding capacity of the soil.
You can water with fertilizers: compost tea, liquid kelp, fish emulsion or vegetable garden mix to further feed the soil.

### 2. Water the roots, not the leaves

Vegetable crops can be 80-95 percent water. You need to put the water in the roots, not the leaves, for plants to absorb it. If possible, use soaker hose, drip irrigation aqua cones/watering spikes, or even a large bucket or jug with a small hole in the bottom to allow a slow steady supply of water at root level. If you water with a hose, direct it to the base of the plants or directly in the ground. Long, deep watering, 1-2 inches per week, applied into the root zone once or twice a week encourages deep roots. Water in early morning or in the evening to minimize water lost to evaporation.
**BAD:** Frequent, short overhead watering – how we often picture watering the garden – is the **WORST** way to do it. Over-head watering – light sprinkling a daily shower on the leaves – wastes up to 50% of the water to the air, is not efficient, and can spread disease and fungus. Even worse, it doesn't reach the roots that need water most.

### 3. Mulch-mulch-mulch

A thick layer of organic mulch does so many good things for your garden. It helps retain the soil moisture, cools the ground, keep down weeds, increases moisture around plants and can even deter some soil-borne disease.
Organic mulches include leaves, straw, hay, compost, grass clippings, newspapers or cardboard.

### 4. Keep plants healthy and happy

Healthy plants need less care and produce more crop. Remove unwanted plants with weeding and thinning to reduce light and nutrient stealing. Take fast action against pests. Keep on top of things for less stress and higher yield.
Keep well weeded – smother weeds with mulch or pull them out by the roots.

Crops need 1-2 inches of water per week. Check soil moisture at 3 inches deep.

## Only water if needed.

Most frequent cause of houseplant death – too much water!

Here is a chart that tells you critical times to water each vegetable crop as well as the number of gallons of water needed. These guidelines assume that you have rich, well-balanced soil.

| Vegetable | Critical time(s) to water for a 5-foot row | Number of gallons of water needed |
|---|---|---|
| Beans | When flowers form and during pod-forming and picking | 2 per week depending on rainfall |
| Beets | Before soil gets bone-dry | 1 at early stage; 2 every 2 weeks |
| Broccoli | Don't let soil dry out for 4 weeks after transplanting. | 1 to 1 1/2 per week |
| Brussels sprouts | Don't let soil dry out for 4 weeks after transplanting. | 1 to 1 1/2 per week |
| Cabbage | Water frequently in dry weather for best crop | 2 per week |
| Carrots | Before soil gets bone-dry | 1 at early stage; 2 every 2 weeks as roots mature |
| Cauliflower | Water frequently for best crop. | 2 per week |
| Celery | Water frequently for best crop. | 2 per week |
| Corn | When tassels form and when cobs swell | 2 at important stages (left) |
| Cucumbers | Water frequently for best crop. | 1 per week |
| Lettuce/Spinach | Water frequently for best crop. | 2 per week |
| Onions | In dry weather, water in early stage to get plants going. | 1/2 to 1 per week if soil is very dry |
| Parsnips | Before soil gets bone-dry | 1 per week in early stages |
| Peas | When flowers form and during pod-forming and picking | 2 per week |
| Potatoes | When the size of marbles | 2 per week |
| Squash | Water frequently for best crop. | 1 per week |
| Tomatoes | For 3 to 4 weeks after transplanting and when flowers and fruit form | 1 gallon twice a week or more |

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| Needs a lot of water during dry spells. | Needs water at critical stages of development. | Does not need frequent watering. |

For more on watering the garden, especially in drought, click to read our article on "The Water-Wise Garden."
Source: http://www.almanac.com/content/when-water-vegetables