

Watering and Water Systems
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When should I water and how often should I water is probably the most asked question by the novice and experienced gardener alike. They are also difficult to answer in some cases. The factors involved could be:

1. The need of the particular plant and age
2. The season
3. The weather – temperature – humidity –amount of wind
4. Nature of the soil and water
5. The method of application – irrigation – sprinkler – drip system

To water strictly by calendar or clock would result in drowning some plants or causing drought in others. Frequent light sprinkling or frequent heavy soaking can both be bad. An example: shallow roots need light and frequent watering - includes most lawns - whereas deep roots need less frequent but heavier soaking.

A little water wets only a little soil. Heavy watering will give damp soil as the water moves down through the soil. You must try to soak all of the root area. Water put in a ditch six inches or more from a row of plants may not water the entire root area. With a hot day and dry wind, many shallow-rooted plants cannot absorb water from the soil fast enough to prevent wilting. Clay or heavy soils hold more water than sandy or light soils.

The one rule that can be used on all types of soil and climate is to test the soil. If the top 3-4 inches is dry, especially during the growing season, you need water soil tubes or hand tools can be used for deeper testing.

Sprinkling water can waste water – evaporation – wind can carry it off- runoff. In areas where the humidity is high some foliage disease can occur such as mildew and rust. If you do use sprinklers, figure it takes one inch of water to penetrate twelve inches of sandy soil – seven inches in loam - and four to five inches in clay. To time how long to leave your sprinklers on set several same size containers out in line with your sprinkler and time how long it takes to produce one inch of water.

Soaking or irrigating is probably the best method for your garden vegetables. A drip system can cut your water use by 20 to 50 percent. You can get emitters from ½ to 4 gallons per hours. There is not loss by wind, evaporation, or runoff. Your plants will take just as much water in this method as in heavy soaking, but you don't waste as much. You can also fertilize with your drip system. Try to plan your garden so if there is runoff, it goes to another row or plant, bush, or tree and not down the hill to your neighbor's yard.

Strawberries: have shallow roots and need moisture throughout the growing season. Light soils need irrigation every 4 to 6 days in summer. Heavy soils every 7 to 10 days. Water early in the morning so berries can dry out during the daylight hours. This reduces the danger of fruit rot.

Tomatoes: Proper watering is most important. Keep the root zone moist throughout the growing season. Tomatoes will root from 4 to 5 foot depths if the soil permits. One or two light waterings during the first month will help establish plants. After that you need to start heavier irrigation. More frequent irrigation is needed in shallow or sandy soils or during periods of high temperatures or strong winds or if near trees or shrubs. Over irrigation on poorly drained soils can drown the roots or cause root disease. Irrigation does not cause blossom drop, but allowing the soil in the root zone to become dry will. During hot dry weather plants may need watering once a week while the usual is every two to four weeks.

Peppers: are moderately deep rooting sometimes going to 4 foot depth. After plants are well established, the moisture should penetrate to the 4-foot depth at each irrigation. Keep uniform soil moisture for best growth and fruit setting.

Zucchini: Squash roots develop rapidly and may penetrate to a depth of 4 feet or more, but most of the roots will be in the top 12 to 18 inches. This is shallow rooting so need frequent watering.

Okra: should have a good moisture supply at planting. Heavy early irrigation tends to cool the soil and slow plant development. Adequate moisture during harvest will encourage rapid development.

Sweet Corn: has coarse, shallow roots when young but can go to a depth of 3 feet when maturing. With good soil moisture at planting, irrigation during the germination period is seldom needed unless there is hot weather. Start regular irrigation when plants are 3 to 6 inches tall. The first irrigation is important because of the shallow root system at this time. On extra hot days leaves may roll up for a short time without any injury but irrigation is needed if leaves are curled in the morning.

Eggplant: is susceptible to root rot with saturated soil conditions or heavy clay soil. The root system can go as deep as 36 to 48 inches, but most will be in the top 18 inches. Frequent irrigation is needed to keep good soil moisture on the top root zone.

Asparagus: should be irrigated mostly during the fern season. Some irrigation may be needed during harvest season in sandy soil or dry weather. Should be well irrigated throughout the first year.

Cucumbers: should never be allowed to suffer from lack of water or nutrients. Some vines will wilt on extra hot days, but will recover in the evening provided they have moisture. If they don't recover, they need water.