

Saving Water
Home
Vegetable
Gardens



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Home gardens are a good use of water, even in a time of water shortage. Although some irrigation is needed to grow a garden in most locations, the amount of water required can be greatly reduced by managing the garden efficiently.

SOIL PREPARATION

Even in a drought year, some rain will fall. Make sure your soil can absorb and hold water which does arrive. Maintain a loose, permeable surface to absorb water readily when it falls naturally or is applied by irrigation.

Soils with a high organic content will absorb and hold more water than low organic soils. Compost added to the garden soil each year or leaves, grass clippings, and cover crops turned under will build the organic content of your garden soil.

PLANTING PLANS

Maximum use of space conserves water and reduces weed growth. Space garden rows so that little soil is left exposed when the plants are fully grown. Onions can be grown in rows 6 inches apart, carrots and beets in rows 12 inches apart. This is about half the normal planting distance. Other crops can also be closely spaced. Plant two or three closely spaced rows, then leave a slightly wider space for walking room. Close spacing makes better use of water applied in the root zone and the shaded soil will lose less water by evaporation.

If you are gardening on a slope of more than 5 degrees, run the planting rows across the slope rather than up and down the hill. This will slow run-off of water from the garden.

If water is critically short, fallow part of your garden for a year and use the available water to intensively garden a limited space. Prioritize your gardening and eliminate or reduce crops which have large space and water requirements and yield relatively small

amounts of vegetables. Examples of crops to cut out are potatoes, sweet corn, and winter squash. Crops with the greatest dollar value per square foot are summer squash, bell peppers, tomatoes, turnips, swiss chard, and green beans.

IRRIGATION

Irrigate thoroughly, but infrequently. This takes less water than light, frequent applications. Each time you water, saturate the soil to a depth of 12-15 inches. Most water in the top 2 inches of soil is evaporated back into the air unless a mulch is used to reduce this loss. Water which penetrates below this zone generally remains in the soil until used by the growing plants.

Check the soil with a shovel to determine when you need to irrigate and how deeply the water penetrates.

Irrigate during or following a light rain. Light showers which do little more than wet the surface are common in dry weather. If you irrigate to amplify a light rain, nearly all the irrigation water can penetrate to a usable depth in the soil. Or irrigate early in the morning when relative humidity is highest and the least evaporation loss will occur.

Use drip or furrow irrigation rather than sprinklers if possible. Soaker hoses and special drip tubes place the water on the soil surface, reducing evaporation loss and placing the water directly over the root zone of the plants.

An adaptation of drip irrigation which is useful for individual plants is to irrigate through cans half buried in the soil. Punch holes in the bottom of the cans to release the water into the soil 3-4 inches below the surface so that little water is lost by evaporation.

Make use of the rainwater from your roof. Even a light rain produces many gallons of run-off water from the roof of your house. If it runs into a storm drain, you are losing a

potential source of good irrigation water. Roof run-off can be collected in barrels or diverted directly to the garden through inexpensive plastic pipe.

WEED CONTROL AND MULCHING

Weeds compete with garden plants for water, nutrients, and light. Keep these thieves out of your garden so your vegetables can have full use of the available water. Avoid tilling the surface, however, as this draws up more moisture for evaporation to the air. If tilling is needed to control weeds, till no deeper than $\frac{1}{2}$ inch.

Surface mulches will help stop weed growth and reduce evaporation loss. Any available waste material can be used for mulching if it is coarse enough to allow for good air and water penetration. The best mulch materials are those that are coarse enough that the mulch material itself does not become a seed-bed for germinating weed seeds. The materials should also be heavy enough that they do not blow off the garden. Use shredded newspapers, dried grass clippings, old leaves, straw, old hay, peat moss, coarse wood shavings, or coarse sawdust. The best time to apply mulch is after the crops are 3-4 inches tall. Then apply a 1-2 inch layer. Coarser materials should be used in a thicker layer than finer materials. Individual plants such as tomatoes can also be planted or transplanted through holes in black plastic mulch.

WISE USE OF WATER

Even when water is plentiful, all of these are sound management practices. They will increase production and reduce your water bill.

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