Water in the Garden

WATER CYCLE IN THE GARDEN
Water falls on the soil when it rains, or when the garden is watered. What happens to this water?

Some water flows away over the top of the soil. This is called runoff.

Some water seeps into the soil, filling spaces between soil particles. Water seeps through sandy soils much faster than through clay soils or compacted soils.

Water soaks into the soil down to the roots of plants. Water taken up by roots moves through the stems to the leaves.

Water may seep through the soil beyond the root zone.

The water in clouds eventually falls to the ground as rain.

Water that is evaporated or transpired eventually forms clouds.

Leaves have thousands of tiny openings through which water vapor comes out of the plant into the air. This process is called transpiration.

Water evaporates leaving salt deposits.

Groundwater rises by capillary action.

Some water evaporates directly from the soil surface, especially in hot, dry climates. This causes water from lower layers in the soil to be pulled to the surface. As water is pulled up through the soil, it may carry dissolved salts. When the water evaporates, salt deposits are sometimes left on the surface of the soil.

TOO MUCH OR TOO LITTLE WATER

Plants need both water and air in the soil. Ideally, half the volume of soil should be pore spaces. About half of each pore space should be filled with water, and about half with air. When soil does not have the right balance of air and water, plants may suffer from stress.

Plants are most affected by water stress right after they are planted or transplanted, and while fruits are forming. Root crops, such as beets and carrots, are vulnerable to water stress while the roots are growing.

These tomatoes have blossom end rot because they did not get enough water when they were forming.
Our garden did not get enough water, so this carrot has a hard core. The lettuce is bitter, and the cucumbers are small and misshapen.