# DRIP IRRIGATION – THE MOST EFFICIENT WAY TO WATER

Its that time again. Spring is here, summer is just around the corner, and that means more water being used outdoors. If this summer is anything like the last, we'll all soon be spending many hours (and gallons) watering our lawns and gardens. One way to more efficiently provide the needed water is the use of a drip irrigation system.

Drip irrigation is a method of applying slow, steady, and precise amounts of water and nutrients to specific areas rather than broadcasting water. At a slow application rate, water seeps into the soil and moves laterally by capillary action beneath the soil's surface. An adequate section of the root zone of the plant is maintained with moisture close to the soil capacity, providing a soil to water to plant relationship which is conducive to better plant growth.

Of all the irrigation methods in use, drip irrigation is by far the most efficient. Sprinklers broadcast water into the air where much of the water is lost to evaporation, never even reaching the plant. It is estimated that 25% of the water coming from a sprinkler head is lost to evaporation.

Benefits of drip irrigation include:

- Conservation of water. A drip irrigation system waters only the area around a plant's root zone.
- The Texas Agricultural Extension Service notes that drip irrigation can reduce water loss in the garden by up to 60% over hand or sprinkler irrigation.
- Consistent moisture improves plant growth, and fertilizers can be added directly to the system.
- Drip irrigation systems are typically installed for considerably less cost than underground sprinkler systems.
- The amount of water applied can be varied to meet the specific needs of a particular plant.

When designing a drip irrigation system, prepare a sketch of your plant location and water source to determine the amount of tubing you will need, as well as the number of other parts, such as the emitters. There are several basic elements to any drip system. The head or valve assembly can consist of several components. First, it is recommended that you install a backflow prevention device, especially if you will be using the system to fertilize as well as water your plants. Next, depending on water pressure, your may need to install a pressure regulator. If the water pressure in your system is over 40 psi, using a pressure regulator will prevent the emitters and connectors from leaking or bursting apart. Typical pressure regulators reduce the water pressure to between 10 and 25 psi. Then, you will need to install a filter to screen out small particles. This will help keep the water lines and emitters from clogging.

Finally, install the tubing and emitters. The emitters will regulate the amount of water that drips from the system to the plants. Most garden vegetable plants need only a 1 to 1½ gallon per hour drip (1 to 1 ½ gallon head drip for 1 to 1½ hours) every other day.

Water wisely – every drop you save counts!