



Answers to questions about structures, ventilation, soil, water, waste, energy, machinery and safety.

Sweaty hoses and sprinkler irrigation

Water costs money. Too little water causes crops to wilt or die, resulting in lost profits. Pumping too much water is both expensive and can leach valuable nutrients away from plants and into groundwater supplies. So how do you strike a balance between the two?

First, know your soil types and how fast they will take up water. Most Ozarks soils will soak up water at a rate of 0.3 to 1.0 inch per hour. If it rains faster than that, the water runs off and is not available for later plant use. Next, remember that in summertime, plant use and evaporation will draw water from the ground at a rate of 0.20-0.25 inch per day. Even when saturated, most of our soils can only store a 9-15 day water supply. So a 4-6 week dry spell means irrigation is needed to make plants thrive.

Which brings us to two commonly-asked questions:

1. What is a cheap, simple, long-lasting type of garden irrigation system to use, and
2. How can I tell how much water my circular-spray sprinkler is applying?

The answer to question #1 is a porous "soaker" hose. Unlike the flat, green, 1½" wide soaker hoses that spray tiny streams of water into the air, these black or brown porous hoses come in 1/2" and 5/8" diameters and 25, 50, and 75 foot lengths. They are most often made from recycled rubber, such as from old tires. They screw to the outdoor faucet or hose end just like a regular garden hose, but the faucet is turned on only ¼-½ turn instead of all the way. The water "sweats" through the hose wall at a flow rate of 0.1 to 1.0 gallon per hour per foot of hose.

Cost of the hose is about \$0.25-\$0.30 per foot. That sounds high, but with care the hose can last 7-10 years. This hose is ideal for vegetable gardens and shrub or flower beds, because it both saves water and has no water spray which can cause foliage diseases. An ordinary house well is an adequate water supply.

For question #2, the easy way is to set out shallow, vertical-sided cans at varying distances from the sprinkler head and run it until you get the desired depth of water in the cans (usually 1-2 inches every week). Or you can use a bucket and time how many gallons your hose runs into it in one minute. Then step off the diameter in feet of the sprinkler spray pattern. Match these two numbers to Table 1 to see how many inches of water you'll be applying per hour.