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Drip irrigation system delivers right

By Martin Curry

Supplemental water may have to be provided throughout the growing season to successfully establish a windbreak.

Drip watering systems are an efficient way to supply the right amount of good-quality water.

Photo 1:

The first part of this drip system includes, connected to either a 3/4-inch garden hose or outdoor spigot, 1) 3/4-inch black polyethylene (PE) pipe designed for drip systems, 2) a regulator to reduce the water line pressure to below 30 pounds per square inch (psi) and prevent emitter blowouts, and a filter to prevent emitters from clogging with sediment, and 3) a backflow preventer to stop any water backflow into the main water supply.

Photo 2:

A simple "T" is used to direct water down each row. I have also included a 3/4-inch valve on each lateral to allow for independent watering of rows. After the 3/4-inch valve, I reduced the PE pipe

down to 1/2 inch and added 10 percent more pipe to each lateral to allow for expansion and contraction due to hot and cold climate changes.

Photo 3:

Ensure supply lines do not rub against small plants by using landscape staples to pin the tubing on each side of the seedlings.

Photo 4:

A specialized tool is used to install emitters. Emitters come in sizes of 1/2-gallon per hour (gph), 1 gph, and 2 gph. These can be used in combination, not to exceed 4 gph per seedling.

Photo 5:

The emitter is punched into the tubing near the seedling using the tool.

Photo 6:

A properly operating system. Flush the system prior to operating. Run water through the lateral tubing until there is a steady flow out the end. Then, simply fold over the end of the tubing and tie shut with wire, or purchase a figure 8 or an endcap. After the

system is in place, mulch around each seedling can aid moisture retention.

A recommended watering schedule will depend on the soil properties and seasonal climate at the site. A rule of thumb for the Laramie area, for example, is to provide shrubs and small evergreen trees 8 to 10 gallons per week the first year, i.e., 1 gph emitter per seedling twice a week for four to five hours. Large deciduous/evergreen trees should be provided 12 to 16 gallons per week the first year, i.e., 2 gph emitter per seedling twice a week for three to four hours. Visit your local Natural Resources Conservation Service or conservation district office for information on growing conditions in your area.

Regular inspection of the windbreak will help determine the appropriate water schedule for your specific soil type and climate. The inspection should include checking the soil moisture around the seedlings by inserting a screwdriver or your fingers in the soil to determine if the soil is moist or dry to a depth of approximately 6 inches. If soil is dry, it is time to water.

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amount of water right where it should

Inspecting the filter and emitters monthly to ensure proper function is critical. At the end of the growing season, simply remove the closure on the ends of the tubing to allow free drainage of the lateral lines. If possible, I suggest removing the regulator/filter assembly and storing indoors for the winter. The drip system should be maintained and used for five to seven years, at which time the trees/shrubs, if properly chosen for the site, should survive.

