Sprinkler System Quick Fixes

Texas A&M AgriLife Research | Extension

Presented by:
Patrick Dickinson

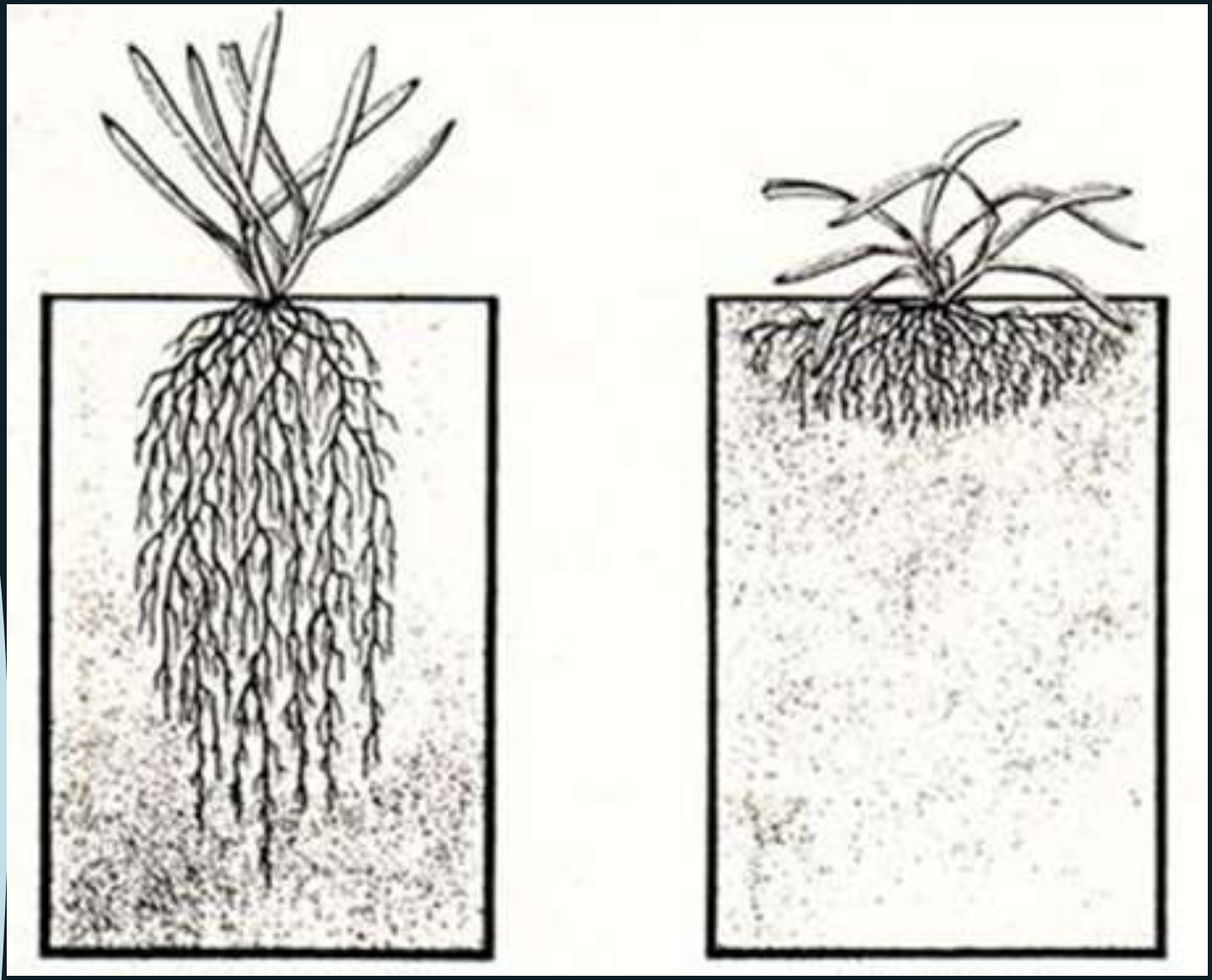
During the summer, it is estimated that 30 to 70 % of water used by residential customers is applied to the landscape.

Common Irrigation Issues

- Over watering
- Improper design and installation
- Improper scheduling practices
- No routine maintenance

Irrigation BMPs

- **Water only when required.**
- **Water deeply to promote deep and healthy roots.**
- **One inch of water will generally penetrate the soil to a depth of six inches.**
- **Water slowly for better absorption. Use drip or soaker hoses wherever possible**
- **Maintain a 2 to 4 inch mulch layer in flower, groundcover, garden and shrub areas**
- **Water newly planted flowers, shrubs and trees individually**
- **Water without creating runoff**
- **Check irrigation system monthly**

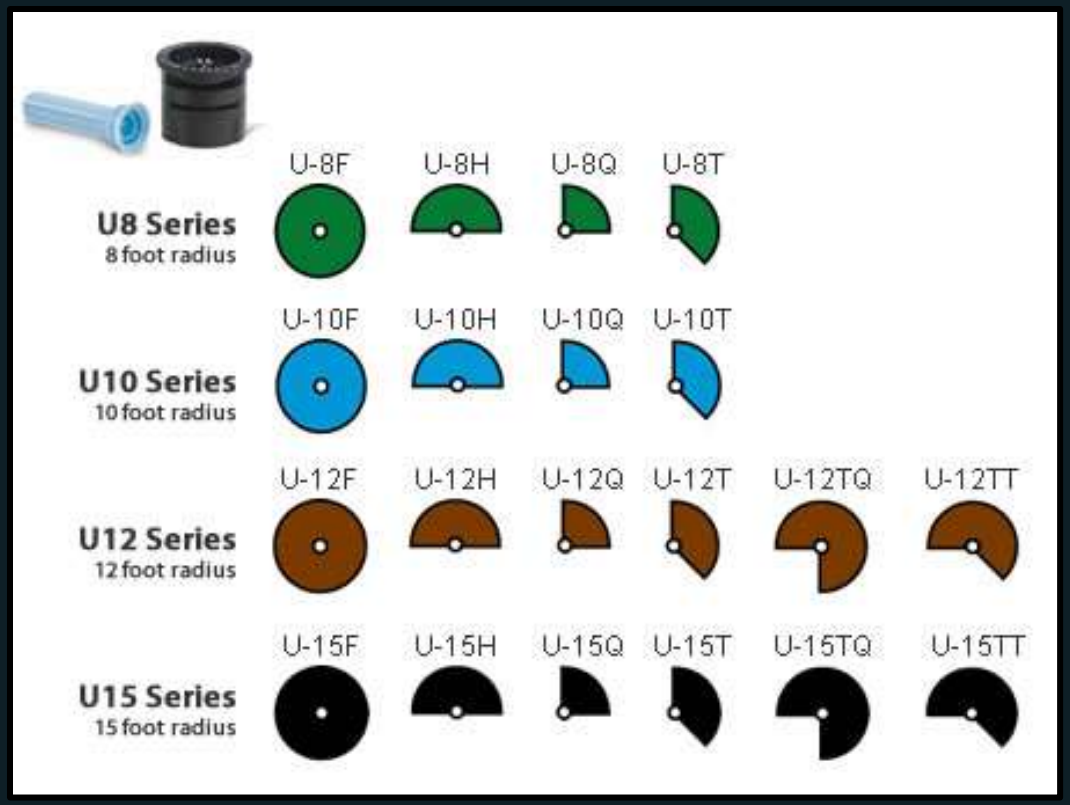


Rain and Freeze Sensor

Rotors

Pop-Ups

Simple System Adjustments that Improve Efficiency



New Technology

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“Problems”

- Sprinkler heads sprays water onto the sidewalk, driveway, or road
- Sprinkler head missing, not operating, with reduced water flow or poor distribution pattern
- Sprinkler heads broken, gushing water out the top or not popping up
- Sprinkler heads no longer straight up and down
- Sprinkler heads that cause a cloud of mist
- Grass, shrubbery or tree blocking distribution pattern
- Dry landscape areas Possible causes: low system water pressure, a plugged nozzle or wind
- Irrigation heads installed too far apart or not in a recommended square or triangle pattern

Where to Locate Leaks That may Reduce Pressure

Misaligned Head

Head will not pop up

Head Not Vertical

Low Pressure

Sunken Head

High Grass

Broken Head and Pipe

Leaky Valve

High Pressure

Catch Can Test

The root zone (where water and nutrient absorbing roots grow) is typically 6 inches deep in clay soil and 8 to 10 inches in sandy soil. Usually 1 inch of water will fill this root zone but in many cases irrigation systems apply water faster than the ground can absorb. Each sprinkler system applies water at different rates therefore a catch can test is essential to determine the run time and efficiency of the system.

1. Place 5 to 9 catch cans (tuna or cat food cans work great) in each irrigation zone or station.
2. Run each zone for 5 minutes to determine how much water is applied in each zone by measuring the amount of water in each catch can. The goal is to water 1 inch.

Example: if there is 1/4 inch of water in each catch can after running for 5 minutes, to apply 1 inch of water set the run time for 20 minutes
(Test each zone. Water application and distribution can vary by zone.)

Cycle and Soak

This method of applying water to the landscape is made up of multiple cycles for each station with 30 to 60 minute for the water to soak into the soil between cycles.

1. The first cycle will break the surface tension of the soil and saturate the top layer of soil.

2. The second cycle infiltrates the soil more efficiently and deeply after the first cycle.

3. A third, and sometimes a fourth cycle, is beneficial if a slope is involved or if runoff occurs after the sprinklers run for just a few minutes.

For example: if you have determined after testing with the catch can test that you need to run a sprinkler station 30 minutes, then you could schedule your controller to run 2 times for 15 minutes, or 3 cycles for 10 minute, depending on runoff

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