TORO Count on it.

Irrigation Solutions

Typical Drip System Layout

Drip irrigation systems can be thought of in two halves. First, the "headworks" portion of the system contains the water sources, pumps, filters, chemical injection equipment and controls. Second, the "field" portion of the system contains the transmission and emission devices used to deliver precise amounts of water, fertilizer, and other compounds directly to the crop. The illustration shows typical layouts for five different types of drip irrigation systems: field crop sub-surface drip irrigation (SDI), short term vegetable crop, longer term vegetable crop, vineyard and orchard.

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Components:

Surface Reservoir and Pump – Typically used to pump surface water - the water may contain biological or organic elements.

Well Pump – Typically used to pump from underground aquifers - the water may contain sand, mineral, or biological elements.

Irrigation Controller – An electronic device that activates the valves according to a user defined schedule.

Chemical Injection Tanks and Equipment – Chlorine, acid and fertilizer are commonly injected from separate tanks.

Primary Filters – Filters clean the water of organic and inorganic elements to avoid clogging of the emission devices.

Control Valves – Regulate pressure and flow; relieve air and vacuum. Pressure gauges and flow meters monitor the system.

Control Valves and Backup Filters – Regulate pressure and flow at each block; provide secondary filtration.

Aqua-Traxx Drip Tape – Toro drip tape irrigates an entire field beneath the soil surface in this subsurface drip (SDI) application.

Aqua-Traxx and Oval Hose – Toro drip tape fed by Toro oval hose creates a wetted corridor along the row in this above ground application.

Blue Stripe Hose and Emitters - Toro emitters installed with above ground Toro hose target irrigate each plant in this vineyard.

Dripline – Toro dripline with pre-installed emitters creates a wetted corridor of moisture on both sides of this tree crop.

Keys to Successful Drip Irrigation:

1. Obtain a soil and water analysis early in the design phase.
2. Determine soil texture and rooting depth.
3. Choose emitter flow rate and spacing carefully.
   - Closely spaced emitters often provide superior wetting patterns.
4. Make sure your system has a flow meter and pressure gauges.
5. Make sure the valves are set for the proper flow and pressure.
6. Know the system application rate in inches per hour.
7. Obtain typical crop water use information for your area.
8. Record system vital signs on a regular basis.
9. Ensure chemicals are compatible.
10. Monitor lateral flush water often.
11. Schedule irrigation frequency and duration to maximize the utility of your system.
12. Monitor soil moisture and crop status regularly.
13. Leach salts beyond the rootzone as needed.

Drip Irrigation:
A Better Way To Farm