Microirrigation systems

- Drip
- Spray (microsprinklers)
- Bubblers
- Line-source

Microirrigation

Microirrigation is the universal term for drip, trickle or microspray irrigation systems. It is a growing technology which has the potential to optimize plant growth, conserve soil, water and fertilizer resources while also protecting the environment.
Emitter flow rates for drip tube are usually defined as flow rates in gpm/100 ft – which usually includes 100 emitters.
LSG Extruded Emitter (Eurodrip)

Typical Build-in Emitter (Toro)

Aqua-Traxx®
Queen-Gil Tape

Tape thickness

Spaghetti tube attachments
Advantages

- Potential water savings
- Smaller flow rates
- Application of chemicals
- Water sources with high salinity content
- Improved Quality of the crop
- Adaptation to any topography
- Reduction of pest and diseases
- Some frost protection
Water flowing from the emitter is distributed in the soil by gravity and capillary forces creating the contour lines, often referred to as "onion" patterns. The exact shape of the wetted volume and moisture distribution will depend on the soil texture, initial soil moisture, and to some degree, on the rate of water application.

Frost protection

Disadvantages – potential problems

- Plugging
- Moisture distribution
- Salt buildup
- Initial cost
- Easy to damage
Uniformity of microirrigation

Overlapping of wetting patterns is critical for the good uniformity—this is especially important on light soils.

Emitter Spacing in Sandy Soils

Overlapping of wetting patterns is critical for the good uniformity—this is especially important on light soils.
Soil texture or an underlining hardpan can influence the water distribution pattern.

**Water Distribution in Soils**

Soil texture or an underlining hardpan can influence the water distribution pattern.
Invisible Landscapes are unspoiled by ugly gadgets, garden hose, driplines or protruding sprinkler heads.
Less Vandalism
Reduced Liability
Grow Healthier Plants