



Urban Ag Micro-Irrigation:

Drip Irrigation: A Targeted Approach

DRIP IRRIGATION

High tunnels require precise water delivery, and drip irrigation is an efficient method for delivering water and nutrients directly to plant roots. This technique minimizes water loss, conserves water, and reduces the risk of soil-borne diseases.



DRIP TAPE: THICKNESS

- **6 Mil:** Short season / trial basis
- **8 Mil:** Standard / full season / under plastic or along rows
- **10 Mil:** Overwinter / rocky soil / more insect resistance
- **15 Mil:** Multi-season for small fruits, overwintering



DRIP IRRIGATION SYSTEM KEY COMPONENTS:

- **Backflow Preventer:** Essential to protect your water source by preventing contaminated water from flowing back into the system.
- **Filters:** Crucial to prevent clogging of emitters. Media, screen, and disk filters are characterized by mesh size.
- **Pressure Regulator:** Used to maintain consistent lower pressure (typically 10-30 psi) throughout the system.
- **Flow Meters:** Accurately measure the volume of water delivered to crops, helping optimize water usage, improve irrigation efficiency, monitor fertilizer application, and track water use.
- **Header Supply Line:** A larger diameter pipe or tubing that distributes water from the main source to individual row lines. Common materials include layflat hose and orchard tubing, which are flexible and easy to install.
- **Drip Tape:** Choose a thickness that suits your needs. Thicker tapes are more durable but may restrict water flow.
- **Emitter Spacing:** Considering crop type, soil type, climate, and plant spacing. Closer spacing is needed for sandy soils, young plants, or hot climates.

WATER REQUIREMENTS FOR SPECIFIC CROPS IN TUNNELS:

- **Tomatoes:** An average of 2 to 2.5 quarts of water per plant per day is needed as fruit grows.
- **Peppers:** Typically needs around 1 quart of water per plant per day, In hot or dry periods, up to 2 quarts per plant per day may be needed.
- **Cucumbers:** A mature plant typically needs around 1 quart of water per plant per day, potentially up to 2 quarts in hot/dry weather.