

Drip Irrigation

Fresh Water a Precious Resource

- Agriculture - the most water consuming industry worldwide
- Less than 1% of all fresh water is accessible from groundwater, lakes and rivers
- At current consumption rates many of the worlds aquifers will be dry by 2050

Irrigation Methods

- Flooding or drenching
- Overhead

Drip

- Micro Sprinklers
- Drip
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Not all roots need water

The majority of roots lie within 1 foot of the soil surface

Root Types

- Primary Roots and "Tap" Roots
- Lateral Roots
- Root Caps

Use of Mulches

- Retain Moisture
- Protect roots from heat
- Beneficial Microbes
- Allows respiration

Drip Irrigation Sources

Home Depot

www.dripstore.com

www.dripirrigation.com

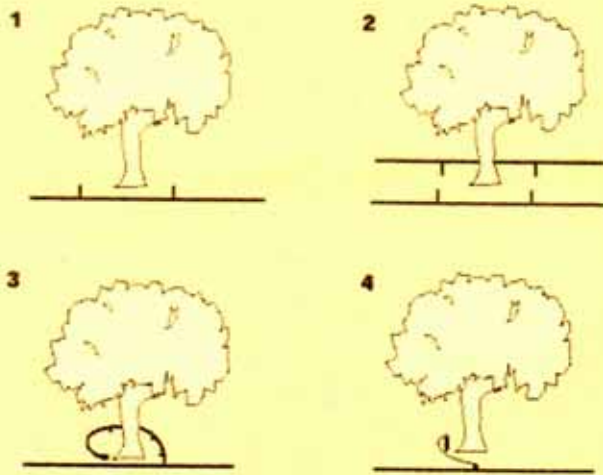
Here are some factors to consider when deciding between drippers or sprays for a particular area

DRIPPERS

MICRO SPRAYS

- | | |
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| <ul style="list-style-type: none"> • can be completely hidden by mulch, protected from view and from damage • need a large number to water an area of ground cover or an annual flower bed • give precise placement of water • minimum water loss by evaporation • in most landscapes, the coverage provided by a drip system will improve as the plants mature. As roots grow deeper, the duration of watering lengthens, and each dripper will irrigate a wider area • maintenance of a drip system requires careful, if infrequent, inspection | <ul style="list-style-type: none"> • cannot be completely hidden; vulnerable to disturbance by children and pets • can be placed 5-8 feet apart so less tubing is needed; easier to cultivate around the system • not as precise as drippers—not good for planters on decks, for instance. Can increase weed growth • lose 20-30% of their water to evaporation • coverage from sprays can deteriorate as the plants grow, blocking the spray patterns • sprays can also be blocked by weed growth • if problems develop with a spray system they are more easily seen |
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Trees



SELECTION, NUMBER & SPACING OF EMITTERS

	<i>Flow Rate (gph)</i>	<i>Number of Emitters</i>	<i>Placement of Emitters</i>
Low shrubs (2-3')	1.0	1-2	at plant
Shrubs and trees (3-5')	1.0	2	6-12" either side
Shrubs and trees (5-10')	2.0	2-3	2' from trunk
Shrubs and trees (10-20')	2.0	3-4	3' apart
Trees (over 20')	2.0	6 or more	4' apart
Flower beds	1.0	1	at plant
Ground cover	1.0	1	at plant
Vegetables, closely spaced	0.5-1.0	1	every 12"
Vegetables, widely spaced	1.0-2.0	one per plant	at plant