

Drip Tip: How to Adjust Lateral Dripline Spacing for Soil Type

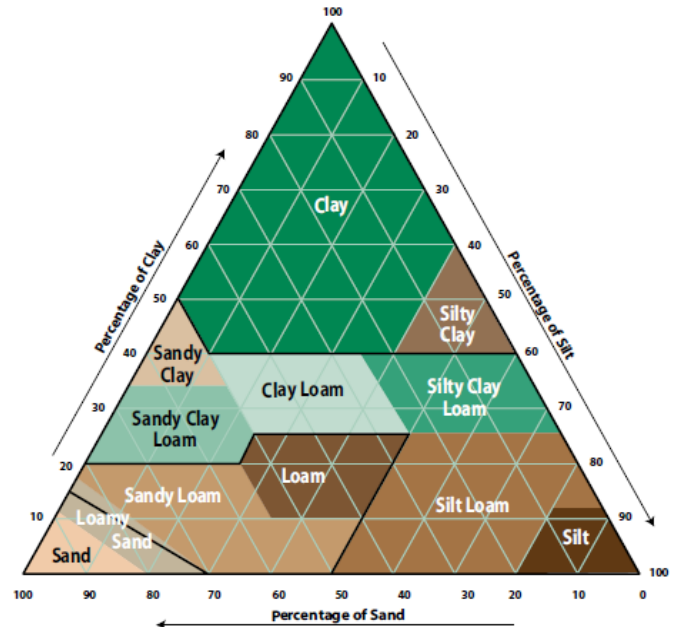
Dripline system design follows many of the same rules as spray and rotor design. Similar design factors must be considered, such as point of connection, static and operating pressures, flow rates, plant material and soil type.

When properly designed and installed a drip system will deliver an even wetting pattern throughout the planting zone. There are four factors to consider to create an even wetting pattern:

- Soil type (clay, loam, sand)
- Emitterflow rate
- Emitter spacing
- Lateral spacing (between the rows)

Identifying the soil type will help you determine the emitter flow rate and spacing, and lateral spacing. If you are not quite sure of the soil type, here is a simple test you can use by squeezing the soil in your hand:

- **Clay** - When clay soil is dry it forms hard clumps and when damp it is flexible and can be molded into shapes.
- **Loam** - A moderate sand or dirt and very little clay. When loam soil is dry it breaks easily and when it's wet it forms a lump.
- **Sand** - Soil particles are loose, sandy grains. When sandy soil is dry it will fall apart when you open your hand and when it's damp it will form a lump but it will crumble easily when touched.



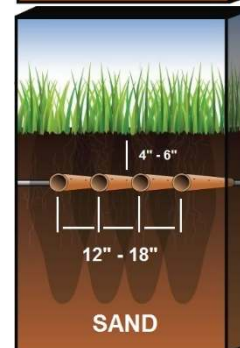
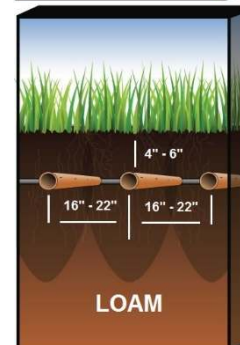
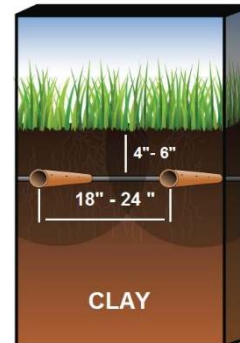
Identify the soil type using the soil test

1. Remove 1 to 2 cups of soil from the zone to be irrigated.
2. Place into a glass jar with lid, like a mason jar.
3. Fill the jar half way with water. Shake and let sit for 2 hours so the particles can settle. The heavier sand particles will settle to the bottom, then silt, then clay on top.
4. Measure the height of all 3 layers of the soil then the height of each layer; divide the height of each layer by the total height to figure out the percentage of each soil in the jar.
5. Apply these figures to the “Soil Classification” pyramid above to identify the type of soil.

On the next page, you will see recommended dripline emitter and lateral row spacing, and emitter flow rate based on soil type.

Dripline Lateral Spacing Depending on Soil Type

XF Series Dripline Recommendations		
	English	Metric
Soil Type: Clay		
Emitter Flow Rate (gallons per hour or litres per hour)	0.6 gph	2.31 lph
Emitter Spacing (in. / m)	24"	.61 m
Dripline Lateral Spacing (in. / m)	18" - 24"	.45 - .61 m
Soil Type: Loam		
Emitter Flow Rate (gallons per hour / litres per hour)	0.6 gph/0.9 gph	2.13/3.41 lph
Emitter Spacing (in. / m)	18"	.45 m
Dripline Lateral Spacing (in. / m)	16" - 22"	.41 - .56 m
Soil Type: Sand		
Emitter Flow Rate (gallons per hour / litres per hour)	0.9 gph	3.41 lph
Emitter Spacing (in. / m)	12"	.3 m
Dripline Lateral Spacing (in. / m)	12" - 18"	.3 - .45 m



Note: These are general guidelines, field conditions may require modification to emitter flow rate, emitter spacing and lateral spacing. XF Series Dripline is to be installed at a depth of 4"-6" (10.2-15.24 cm) in sub-surface and groundcover applications. XF Series Dripline may also be installed on-surface under mulch in shrub and groundcover applications.