Don’t Be A Drip... Leave That To Your Garden

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Water

- Vital resource
- Limited resource
- Try to maximize effectiveness
- Study and implement the best watering practices
Some Current Stats

- 79% of normal with water levels (PG)
- Utah goal to use 25% less water by 2025 (from 2000)
- 90% of all plant problems that we are asked to consult on are caused by too much water (Utah County Master Gardeners)
- Current water use in Utah is 240 gallons per person per day
- Utah is 2nd fastest growing state in the US (adding just under 200,000 people every 4 years)

Recommended

- No Irrigation
- One Irrigation
- Two Irrigations
- Three Irrigations

http://www.conservewater.utah.gov/WateringIndex/Default.asp

One irrigation:
- .5 inches of water
- 20 minutes for sprays
- 40 minutes for rotors
Watering Techniques

- Flooding
- Row watering
- Sprinkling
- Drip watering
Drip Irrigation – Why?

**Benefits:**
- Water only the area where you need water
- Water deep
- Very little evaporation
- Efficient use of water
- Water Saving ($$)
- Less Plant Stress
- Micro Manage Watering Zones
- Controlled Fertilization
- Weed Control
Drip Irrigation – Why?

Hesitations:
- Setup Time
- Cost of Equipment
- Higher Maintenance
Drip Irrigation Solutions

- Soaker Hose
- Drip Tape
- Drippers
- Bubblers
- Spray Heads
- Emitters

Art taken from *Baobab* magazine, now published by ALIN (Arid Lands Information Network), based in Nairobi, Kenya.
Soil Saturation

Note that wetted zone has greatest width below soil surface.

Drip Irrigation: Basic Layout

Valve
Backflow Preventer
Pressure Regulator
Filter
Tubing Adapter
Drip Tubing

18" Minimum Between Emitters

Emitters
End Cap
## Drip Irrigation – Basic Parts

- Water source
- Timer or control
- Back flow preventer  
  - Only on culinary
- Pressure Regulator  
  - 40, 25, 10 lb.  
  - Needs to be low pressure
- Filter  
  - At least one per line, maybe two
- Tubing adapter/connector
- Drip tubing
- Emitters
- End cap  
  - Cheap or commercial
- Opt. Nutrient Injector

## Four Different Drip “Lines”

- Soaker Hose
- In-line emitter tubing (dripline)  
  - Regulated  
  - Unregulated
- Drip tubing (blank) for custom emitters  
  - Use with assortment of emitters
- Drip tape (typically for vegetable gardens)
Soaker Hose
In-line Emitter Tubing

½ inch ¼ inch
In-line Emitter Tubing

- Regulated
  - Each emitter drips at the same rate
- Drips after pressurized
- Typically 25 or 40 lbs. pressure
- 6, 12, 18, 24 inch spacing available
- Great for bedding plants, ground covers, vegetables and other close plantings
In-line Emitters
Drip Tubing – Custom Emitters

- No emitters by default
- Can add emitters of different types and sizes to the same line
  - in-line emitter tubing can be added to same line
- Typically 25 or 40 lbs. pressure
- Spacing depends on what plants are being watered
- Great for flower/shrub areas, trees, odds shapes
Choose Layout

The goal is to create a root area for each plant about the same size as the plant canopy. It doesn't need to be perfectly under the canopy.

SHADE STRUCTURE ON PATIO (TOP VIEW)

1/4" ELBOW
1/4" TEE
1/4" COUPLER
3-1/4" TEES
1-1/4" ELBOW
1 1/4" ELBOW, 1/4" TEE
8 FT FROM GROUND UP TO FIRST BASKET
1/2" SOLID TUBING WITH END CAP

HANGING BASKETS (4 TOTAL)
Layout Main-line

- Main line is usually 1/2 inch tubing
- Use T, coupling, elbow, stakes and end closures
Extension Tubing Where Needed

- 1/8 inch extension tubing
- Use T, coupling, elbow, plugs and stakes

Your Best Friend...
Drip Emitters

RED BD Emitter 0.5 GPH
BLACK BD Emitter 1.0 GPH
GREEN BD Emitter 2.0 GPH

RED WP Emitter 0.5 GPH
BLACK WP Emitter 1.0 GPH
GREEN WP Emitter 2.0 GPH
Micro Emitters

- Allows for precise watering of certain areas
- Can be fine tuned
- Great for annual beds, ground covers
- It is sprinkling, so watch for weeds

Bubblers
Connectors For Sprinkler Heads

Drip Tape
Drip Tape

- Easy to use
- Fairly cheap per foot
- Great for vegetable gardens
- Replace drip tape every couple of years
Drip Tape

Drip Tape
Drip Tape

Tips
- Use same brand throughout each zone
  - Suggestion
- Watch the pressure requirements
- Remember slopes
- Know you water pressure
- Plan out zones before installation
  - Know #gallons per hour per line
Remember…

- Ask questions…learn as you go
- Drip line is by far less expensive than sprinkler and lawn care
- The combinations and options are almost endless
- If you have a plant that needs water…a drip solution probably exists

Q&A

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