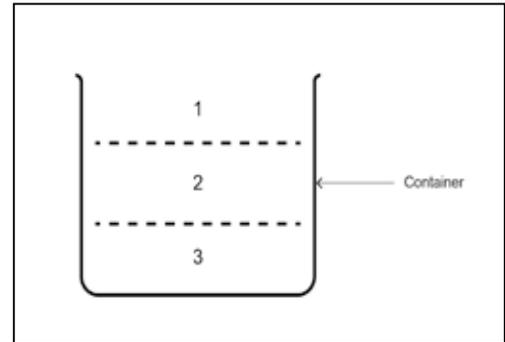


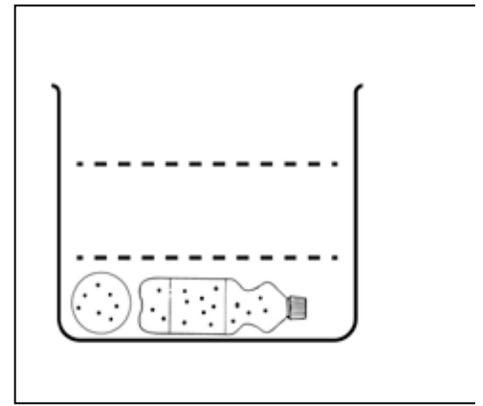
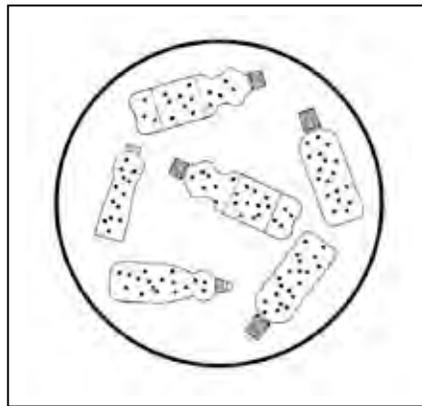
SUB-IRRIGATED PLANTERS (SIPs)

How to Build an SIP

- 1) Choose a container that does not leak. If the container leaks, it can be lined with a sturdy plastic bag or a piece of plastic sheathing. You can use just about any container that is large enough for your plant(s): five-gallon buckets, plastic barrels, etc. Translucent 30 or 55 gallon plastic barrels are my favorite containers. They let in light and they are very sturdy. I buy used barrels for \$10-25. They are typically used for soaps or food products. I avoid containers that held harsh chemicals.

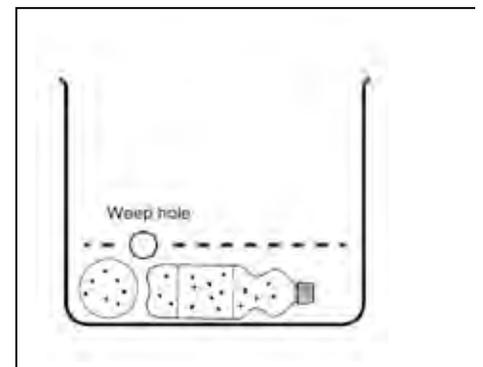


- 2) Place into the bottom of the container, discarded plastic containers such as pop bottles and food jars. Plastic containers can be drilled with holes to allow water to fill the void. Even wide-mouth glass jars placed on their sides will work as reservoirs. These reservoirs will hold water for plants. After you've drilled holes in the reservoirs, they need to be placed in an old nylon stocking or a piece of cloth. This allows water into the reservoir, but not soil. The reservoirs are placed in the bottom of the SIPs. They will create a void that will be 4-6 inches deep.

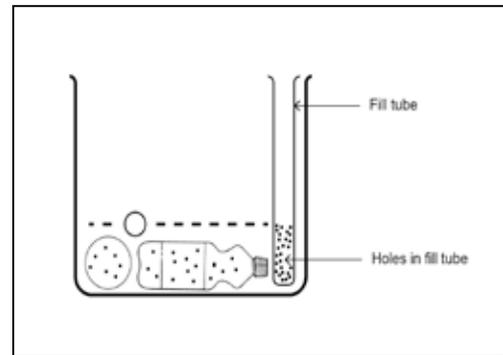


After you've drilled holes in the reservoirs, they need to be placed in an old nylon stocking or a piece of cloth. This allows water into the reservoir, but not soil. The reservoirs are placed in the bottom of the SIPs. They will create a void that will be 4-6 inches deep.

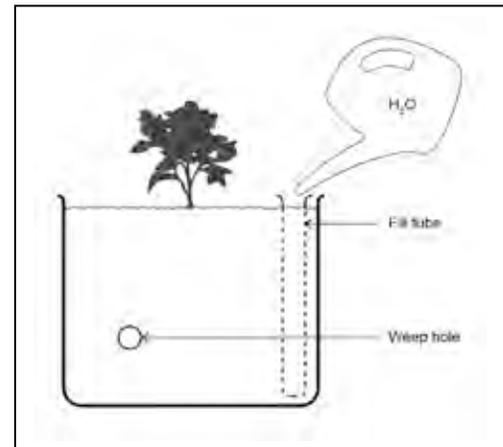
- 3) Drive two $\frac{3}{4}$ -inch holes in the SIP just above the depth of the reservoir created by containers wrapped to prevent filling with soil. These holes are called weep holes. They allow excess water to leave the container so that plants cannot drown. Make sure that you will be able to see the weep holes when the SIP is in place.



4) Place a fill-tube in the planter. Put it well away from the weep holes. You can use a tall plastic container or a piece of plastic pipe for the fill-tube. Drill holes in the bottom 6 inches of the fill tube. Cover the holes with a nylon stocking or a piece of cloth so that the fill-tube won't become filled with soil. Hold the cloth or stocking in place with duct tape. Large pipe (2-4 inches) is easy to fill.



5) Fill the planter carefully with lightweight, fluffy potting soil or compost. I often use horse, cow, chicken or sheep manure mixed about 50/50 with sawdust or fine woodchips and composted for at least one year. For another option, see Mel Bartholomew's Square Foot Gardening. Put the SIP where you want it. Once it is filled with soil and water, it will be very heavy and difficult to move.



6) Add water slowly through the fill tube. Fill only until water starts to come out of the weep hole. Do not overfill. Because you are using a SIP, you will need much less water, perhaps 50-70% less water. Less water will be lost to evaporation. After your plants are established, you may choose to cover the exposed soil with mulch to further discourage evaporation. You may need to keep the topsoil moist while your seeds are germinating or if the weather is particularly hot and windy.

Advantages of the SIP Planter

- 1) It uses less water.
- 2) Soil nutrients are not washed away.
- 3) Soil amendments and plant supplements can be customized to each SIP.
- 4) If you use a translucent barrel with a lid for your SIP, you can protect young plants from wind, hail and frost.

Authors Note

Through the years, I have encouraged many people to try SIP planters. I have spent four years experimenting with the best way to construct and

use the SIPs. Often I find that my instructions are ignored and the planter performance is poor. Here are some pointers: You cannot use soil in the SIP planters or any container because it becomes hard as concrete. You must use a potting mix that remains fluffy and friable. You must follow the reservoir instructions carefully; no more than 4-6 inches deep. You must have at least three $\frac{3}{4}$ -inch weep holes. If you do not follow instructions carefully, your SIPs will be disappointing.