



Soil Blocks for Transplant Production

Author: Adam Montri, Michigan State University and Ten Hens Farm

See the video for Soil Blocks for Transplant Production online at www.mifma.org or on MIFMA's YouTube channel.

Soil blocks are used in place of standard plug trays for vegetable transplant production. They come in various sizes and those that use them see little to no transplant shock. This is attributed to the roots air-pruning when they reach the sides of the soil block as opposed to continuing to grow around, as is the case in plug trays.

Soil blockers are available in a variety of sizes with different numbers of blocks available. Common options include:

Hand or Stand-up	Block Size	# Of blocks	Estimated Cost
Hand	Mini (3/4")	20	\$25
Stand-Up	1 3/8"	20	\$180
Hand	1 1/2"	5	\$30
Hand	2"	4	\$30
Stand-Up	2"	12	\$180
Hand	4"	1	\$100

Media and wetness impacts how well the blocks are formed. The media should be wet but not completely saturated. If the media is too dry, the blocks will not form well and edges or other parts of the block where the media did not fill will be missing or crumble when trying to remove the blocks from the blocker.



The media should be mixed with water on a solid surface or in a hard container so that the blocker can be pressed down onto this hard surface to make sure the block spaces are completely filled by the media. Soil blocks can then be extruded onto another hard surface, such as a piece of polycarbonate or hardware cloth, or into open trays often used to hold plug trays.

When watering the soil blocks, it is important to use either a mist nozzle (for the mini blocks) or a gentle shower for the larger sizes. This keeps the soil blocks from “melting” from too much water being applied too quickly. If the shower setting on the watering wand or handle is not adjustable or comes out too fast the nozzle or wand can be turned upside down so that the water falls gently on the soil blocks. Care should also be taken when transporting the blocks from the greenhouse to the field so that they do not fall over, roll off or when they are being held or otherwise become damaged in transport.

Most transplants can be grown in the 1 3/8” to 2” soil blocks for the entire time before being transplanted into the field. Some farmers move tomatoes up into the 4” blocks while others transplant them out in the smaller ones. The mini blocks work well for starting flowers or other small seeds that may be slow to germinate, such as celery, celeriac, and scallions.



Michigan Farmers Market Association (MIFMA)
480 Wilson Road, Room 172, East Lansing, MI 48824
Ph: 517.432.3381 • www.mifma.org