



**NEW GARDEN  
LANDSCAPING & NURSERY**

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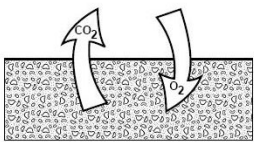
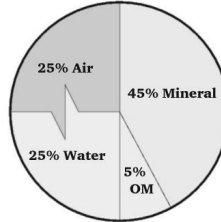
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# PermaTill® One Time

## Superior Conditioner for Clay and Compacted Soils From Permatill.com

(when viewing online, all links will take you to [Permatill.com](http://Permatill.com))

Landscape plants perform best in soils that contain pore spaces that allow water, air and roots to move freely deep into the soil. Ideal soil structure consists of 50% particulate matter, 25% available pore space for water, and 25% available pore space for air. The size and arrangement of various soil particles as well as the presence of organic matter and microorganisms are key factors in balanced soils and healthy roots. In many regions, soil types have been disturbed and compacted so that air and water movement is greatly reduced if not diminished.



Oxygen (O<sub>2</sub>) and carbon dioxide (CO<sub>2</sub>) exchange in the soil.

PermaTill restores healthy soil structure but does not replace the needs for organics. If your soil is low in organic content add 10-15% good compost along with the PermaTill. Compost adds beneficial microbial activity to the soil and needs to be replaced from time to time. PermaTill is a permanent structural component that only needs to be installed once.

### New Plantings

Remove unwanted vegetation and debris. Spread the layer of PermaTill over the entire area to be amended. If organic matter is required, add ½" layer of approved compost in addition to the PermaTill. How much PermaTill depends on the desired root depth and the existing soil.

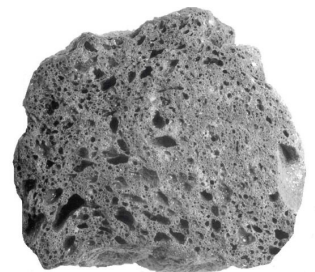
If your Finished soil depth will be	then add	PermaTill layer depth
6" - 8"	then add	1.5" - 3"
10" - 12"	then add	3" - 4"
18" - 24"	then add	6" - 8"

### Existing Plants

Use a spading fork to loosen the soil around the drip zone of plants to desired depth for root growth. Fill the cracks to the surface with PermaTill. Top-dress with compost if needed. Tamp and water thoroughly.

For large trees and shrubs professionals recommend vertical mulching and radial trenching out from the drip zone. Fill trenches and auger holes with PermaTill for long term aeration.

Stalite PermaTill is an excellent soil cover mulch. It does not deteriorate or compact the soil surface. It reduces stem rot and soil borne diseases on the foliage of susceptible plants. Weed seeds do not germinate in PermaTill, and PermaTill deters slugs.



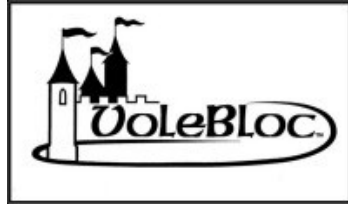
Enlarged View of STALITE  
PermaTill® rotary-kiln fired  
expanded slate particle

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# PermaTill® cont.

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VoleBloc is not a repellent or bait. It is a physical barrier system that protects bulbs and roots without restricting growth! The VoleBloc Barrier dramatically reduces vole damage while adding permanent aeration, improved drainage, and nutrient holding capacity to soils. We are talking about VOLES. Not moles.

Are your plants leaning or falling over because roots are being gnawed? Or are they mysteriously disappearing? If so, you may have voles. The pine vole, (*Microtus pinetorum*) is becoming a bigger problem in the landscape as increased development reduces their natural habitat and they become more adapted to our backyards. To read more about pine voles go to ["More on Voles"](#)

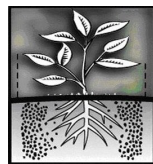
To see additional photos of voles and vole damage to plants go to the vole section of [our projects](#).

The PermaTill-VoleBloc Barrier works because voles do not dig through materials that are coarse in texture. That is why you'll find that vole burrows and tunnels are shallow typically occur under mulches, raised beds, new sod, and abandoned mole tunnels.

Because it is PermaTill, the Barrier stores air, moisture and soluble nutrients for the roots and bulbs it protects.

The VoleBloc Barrier is permanent, non-toxic, and safe for use anywhere in the landscape. The Barrier system can be installed at time of planting, or around existing plants.

### For existing plants:



Dig a 'moat' around the plant just outside of the drip zone. The moat should be 10'-12" deep, and 3"-4" wide. Fill the moat with 100% PermaTill-VoleBloc to the soil surface and add a 1"-2" layer of PermaTill as a mulch from the plant stems to the moat perimeter.

### For a new plants:



Dig the hole 6-8" wider and 1" deeper than the root ball. Place a 2" layer of PermaTill on the bottom of the planting hole before setting the root ball in the center, allowing for a 3-4" wide moat of 100% PermaTill back fill from the bottom of

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New Garden Landscaping & Nursery

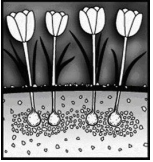
"Where your imagination takes root"

# PermaTill® cont.

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the planting hole to the soil surface. Mulch the surface around the stems with 1-2" 100% PermaTill.

## **For bulbs:**



Dig the planting hole 2-3" deeper than required for the bulbs. Place a 2-3" layer of PermaTill on the bottom of the planting hole and set the bulbs directly on the PermaTill. Backfill to completely cover the bulbs with 100% PermaTill. Once the bulbs are covered, use a 50:50 blend of PermaTill and existing soil to fill the planting hole to the soil surface. As fragile as bulbs appear to be, they grow beautifully in the coarse PermaTill-VoleBloc barrier.

## **VoleBloc Mulch Barrier:**

Don't forget to mulch the soil surface around the stems with VoleBloc after installing the root barrier. Voles are persistent and will dig into the roots from the surface. This practice will not only discourage voles, but will reduce soil borne diseases on stems and foliage. Also, slugs do not like to crawl on PermaTill-VoleBloc

## **Annual Flower and Vegetable Beds:**

Calculate annual bed area: length x width x desired depth for the total volume of soil to be amended for vole control.

Multiply that number by .5 (1/2) to get the total volume of PermaTill needed.

Example: For root depth of 8-10" - spread 4-5" of PermaTill on the surface and thoroughly till into the soil. PermaTill VoleBloc particles will not float to the surface or degrade over time and reduce vole activity season to season.



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