CUMBERLAND VALLEY RAIL TRAIL

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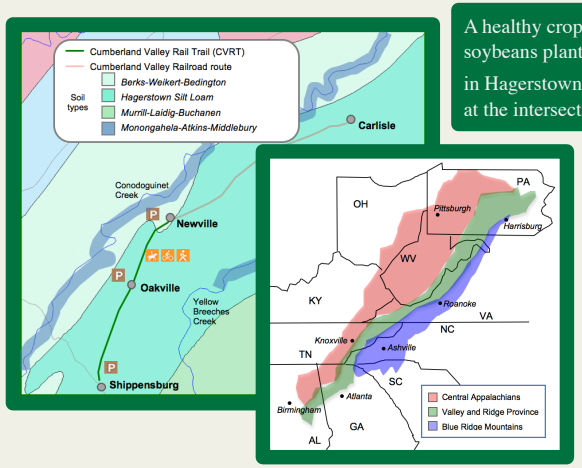
Hagerstown Silt Loam

Origins of the soil: The Cumberland Valley consists primarily of limestone that was formed 500 million years ago when the land you are standing on was submerged beneath a shallow, warm ocean. The collision of the African and North American continents about 250 million years ago caused this land to crumple and heave upward while the ocean waters in the area drained away. Subsequent weathering and erosion created the *Valley and Ridge Province* in which this valley is located. The 500-foot-high ridges you see to the north and south consist of sandstone which is relatively resistant to erosion. The band of limestone between these ridges was dissolved by rainwater over the course of time to create the valley.



Hagerstown Soil: The rock below you, and the occasional outcropping you will see in nearby fields, is about 90% limestone. The other 10%, left after the limestone weathers and breaks down over the course of centuries, is what makes up the *Hagerstown Silt Loam* found in the valley's farm fields.

A healthy crop of soybeans planted in Hagerstown Silt Loam and ready for fall harvest at the intersection of Burnt House and Adams Roads.

Image credit: Don Kovacs

Hagerstown Silt Loam is a nutrient-rich, well-drained, and moderately-permeable soil which is ideal for field, vegetable, orchard, and pasture crops. It is the unique set of characteristics of this soil that set the scene for extensive and productive agricultural activity in the Cumberland Valley that began in the early 1700s and continues all around you today. It takes about 100 years to form one inch of high-quality topsoil like the fertile silt loam of this valley.

Silt loam: Soil consisting of about 20% sand, 60% silt and 20% clay. Traces of iron in the clay account for the orange coloration of the soil in this valley.

No-till farming: The desire to preserve this high-quality soil gave rise to interest in *no-till* farming. First widely employed in the 1940s, no-till farming techniques are designed to maintain soil quality and reduce soil erosion by minimizing soil disruption during planting and harvesting activities. When planting, special no-till plows create a narrow furrow just large enough for the crop's seeds to be injected along with a layer of fertilizer, eliminating the need to fertilize the whole field. Special attachments then close up the furrow after the seed and fertilizer have been put in place.

Corn is being planted and fertilized here using modern, no-till planting equipment. The farmland pictured, located just south of the trail corridor in West Pennsboro Township, has been preserved for agricultural purposes under the state's Agricultural Easement Program.

Image credit: Denny McCullough

No-till farming minimizes soil disruption that would expose the soil's nutrients to the air, causing them to break down. It also makes soil run-off less likely during heavy rains. These methods help local farmers be more productive while also preserving the fertile soil of our valley for generations to come.