

## Conservation Planning for Your Soil

Here is a ten step system to better crops, and cropping system to improve soil and water quality, and to boost production overall efficiency for your cropland.

- 1) Eliminate soil erosion: all soil erosion should be eliminated or minimized as much as possible. This is needed so the soil can build or in the case of eroded soils rebuild the natural fertility. Soils have the natural ability to weather and rebuild themselves with the recycling of organic matter and the weathering of the parent material.
- 2) Minimize the tillage: The more the soil is worked up and turned over the more the soil becomes compacted and loses its soil structure. This is important for pore and air space in the soil which relates to the internal drainage and water holding capacity of the soil.
- 3) Maximize organic matter production: most soils in Prince William County have less than 2 percent organic matter in them. Organic matter can be grown by leaving as much living plant material or previous crop residue on the ground as possible.
- 4) Maximize organic matter return to the soil. Soil was meant to be covered, continually keep the soil covered, preferably with a living crop.
- 5) Give it some time: It takes mother-nature years to build the soil, so we need to be patient. It may take five years or more for the real benefits of this soil building process to take effect.
- 6) Grow something year around; always keep a living crop on the ground. Fallowing the cropland during the winter creates a loss of organic matter.
- 7) Diversify Crops - Grow a variety of crops on the same ground. The more species the better with at least three different ones including one or more legume crops to help build the nitrogen in the soil.
- 8) Prevent Compaction: Please stay off wet soils. Running over soils that are too wet with either heavy equipment or livestock serve only to compact the soil thereby reducing pore space so plant roots cannot grow through it.
- 9) Optimize Nutrient Applications: Plants and soils can only use nutrients when needed, and can become saturated if not taken up by the plant or held by the soil. These saturated nutrients can become detrimental to water quality as they leach or run-off the land into our waterways. A Nutrient Management Plan helps determine plant and soil needs budget for your crops.
- 10) Optimize Pesticide Applications: Use an integrated pest management system to determine if and when your crop needs pesticide management.

If you are interested learning more about building your soil structure and protecting water quality please call the Prince William Soil & Water Conservation District ,13061Fitzwater Drive, Nokesville, Va. 20181, Telephone 703.594.3621, [www.pswcd.org](http://www.pswcd.org).