



3. Productive Soils

Objectives

- Reduce soil erosion
- Increase soil productivity

Buffer functions

1. Reduce water runoff energy
2. Reduce wind energy
3. Stabilize soil
4. Improve soil quality
5. Remove soil pollutants

Design Guidelines for Productive Soils	Buffer Functions				
	Reduce water runoff energy	Reduce wind energy	Stabilize soil	Improve soil quality	Remove soil pollutants
3.1 Buffers and cropland management	✓	✓	✓	✓	
3.2 Windbreaks for wind erosion	✓	✓	✓	✓	
3.3 Herbaceous wind barriers	✓	✓	✓	✓	
3.4 Grassed waterways	✓		✓		
3.5 Phytoremediation buffers	✓	✓	✓	✓	✓

Additional Design Guidelines that may Benefit Productive Soils	Buffer Functions				
	<i>Reduce water runoff energy</i>	<i>Reduce wind energy</i>	<i>Stabilize soil</i>	<i>Improve soil quality</i>	<i>Remove soil pollutants</i>
1.1 Buffers and land management	✓	✓	✓	✓	✓
1.4 Target buffers in watersheds	✓	✓	✓	✓	✓
1.6 Buffer site design	✓		✓		
1.7 Variable buffer width	✓		✓		
1.8 Effective buffer area ratio	✓		✓		
1.10 Buffers for sediment	✓		✓	✓	✓
1.18 Allowances for bank erosion			✓	✓	
1.20 Vegetation for removing pollutants	✓		✓	✓	✓
1.21 Stiff-stemmed grass barriers	✓		✓		
1.22 Vegetation for bank erosion control			✓	✓	
4.4 Windbreaks and crop yields	✓	✓	✓		✓
4.5 Alley cropping	✓	✓	✓	✓	✓
5.10 Waterbreaks	✓		✓		
7.4 Soil erosion and trail recreation	✓	✓	✓		