



Surface Roughening

What is Surface Roughening?

Surface roughening is performing tillage operations that create random roughness of the soil surface. This best management practice (BMP) can help reduce wind erosion, protect plants from windblown particles and lessen the impact of agriculture on water quality.

What are the benefits of this practice?

- Reduces wind erosion
- Reduces dust emissions into the air
- Reduces deposition of soil into surface water
- Protects plants from abrasion by wind blown particles



Where can this practice be applied?

This BMP can be applied to soils that have a surface layer suitable for clod formation and have a high potential for wind erosion because of lack of surface cover. It should not be used as a primary erosion control practice.



Agriculture in the Arroyo Colorado Watershed

The Arroyo Colorado Watershed is 706 square miles and runs from McAllen to the Lower Laguna Madre. The water body is impaired for dissolved oxygen, bacteria and legacy pollutants. In 2007, local stakeholders developed and published *A Watershed Protection Plan for the Arroyo Colorado Phase I* that identifies strategies to address water quality issues. The plan is currently being implemented throughout the watershed.

Agricultural production comprises almost half of the land within the Arroyo Colorado Watershed. A goal of the watershed protection plan is to have best management practices implemented on half of the irrigated agricultural lands by 2015. Runoff from these agricultural lands carries nutrients and sediments, which contribute to the above impairments in the Arroyo Colorado.

Be a part of conserving this precious natural resource by adopting a BMP and lessen the impacts of agriculture on water quality.

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What can you do and who should you contact?

The Texas State Soil and Water Conservation Board (TSSWCB) and the USDA Natural Resources Conservation Service (NRCS) have multiple programs that offer technical and financial assistance to agricultural producers to implement BMPs on their farm.

Environmental Quality Incentives Program (EQIP), offered by NRCS, is an annual program with specific time frames and registration periods.

TSSWCB offers assistance through its Water Quality Management Plan (WQMP) Program. A WQMP is a voluntary site-specific plan developed by local Soil and Water Conservation Districts for producers that includes land and production practices as well as management measures. Both WQMPs and EQIP are designed to reduce nonpoint source pollution and provide cost share assistance.

If you have questions, you may also contact the Texas AgriLife Extension Service agent for your county.

Contacts

Serving Hidalgo County, Texas

Edinburg Service Center
2514 S Veterans Blvd
Edinburg, TX 78539
(956) 383-3002
Farm Service Agency
Natural Resources Conservation Service
Rural Development
Southmost Soil & Water Conservation District

Texas AgriLife Extension Service – Hidalgo County
Mr. Brad F. Cowan
County Extension Agent-Agriculture and Natural Resources
410 N 13th Ave
Edinburg, TX 78541
(956) 383-1026
b-cowan@tamu.edu

Serving Cameron County, Texas

San Benito Service Center
2315 W Frontage Hwy 83
San Benito, TX 78586
(956) 399-2522
Farm Service Agency
Natural Resources Conservation Service
Cameron Soil & Water Conservation District

Texas AgriLife Extension Service – Cameron County
Dr. Enrique Perez
County Extension Agent-Agriculture and Natural Resources
1390 W Expressway 83
San Benito, TX 78586
(956) 361-8236
e-perez@tamu.edu



Serving Willacy County, Texas

Raymondville Service Center
255 FM 3168
Raymondville, TX 78580
(956) 689-2542
Farm Service Agency
Natural Resources Conservation Service
Willacy Soil & Water Conservation District

Texas AgriLife Extension Service – Willacy County
Mr. Omar Gonzales
County Extension Agent-Agriculture and Natural Resources
170 N Third Street
Raymondville, TX 78580
(956) 689-2412
ogonzales@ag.tamu.edu

Serving all counties

Texas State Soil and Water Conservation Board
Harlingen Regional Office
1824 W Jefferson Ave, Ste A
Harlingen, TX 78550
(956) 421-5841

Mr. Jaime Flores
Arroyo Colorado Watershed Coordinator
Texas AgriLife Research
2415 E Highway 83
Weslaco, TX 78596
(956) 968-5581
jjflores@ag.tamu.edu

Texas Water Resources Institute
1500 Research Parkway, Suite 240
2118 TAMU
College Station, TX 77843-2118
979.845.1851 (T)
twri.tamu.edu