

Fiscal Year 2023 (FY23)
NMDA's Healthy Soil Program
Resource Concern Guide Sheet for CROPLAND

This guide sheet is designed to help you select agricultural practices to address your existing resource concerns on cropland. It is intended as a starting point rather than as an exhaustive list of all resource concerns and agricultural practices that can address existing resource concerns. These agricultural practices align with those promoted by the New Mexico office of USDA's Natural Resources Conservation Service (NRCS). The three-digit codes associated with NRCS New Mexico Practice Standards are listed and hyperlinked below to provide you additional information.

The soil health principles as defined in the 2019 Healthy Soil Act are listed below. They correspond with the numbers in the right-hand column of the chart that follows.

- 1) keeping soil covered
- 2) minimizing soil disturbance on cropland and minimizing external inputs
- 3) maximizing biodiversity
- 4) maintaining a living root
- 5) integrating animals into land management, including grazing animals, birds, beneficial insects or keystone species, such as earthworms

Resource Concern	Agricultural Practice on Cropland	Soil Health Principle
Erosion (wind and water) Presence of eroding soil (soil movement both on to and off of the field) due to wind, rain, or irrigation water application	Cover crops to protect soil surface (340)	1, 2, 3, 4
	No-till (329) or reduced-till (345) farming techniques	1, 2, 3, 4
	Field borders (unharvested crop residue and/or high-residue plantings along field edges; shrub establishment) (386)	1, 2, 3, 4, 5
	Mulching (484)	1, 2, 3
Low soil organic matter Lack of organic materials at various stages of decomposition within the soil	Cover crops (340)	1, 2, 3, 4
	Organic-based soil amendments (compost, manure, biochar, etc.) (590), (484)	3
	Diverse crop rotation (cash crop) (328)	1, 3, 4
	No-till (329) or reduced-till (345) farming techniques	1, 2, 4
	Proper grazing of cover crops/cash crops (528)	3, 5
Water infiltration and percolation Poor water movement into and within the soil (ponding of water after rain events or irrigation)	Cover crop mixes with various rooting depths (340)	1, 2, 3, 4
	Organic-based soil amendments (compost, manure, biochar) (590), (484)	3
	Short-duration, high-intensity grazing (528)	5

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Resource Concern	Agricultural Practice on Cropland	Soil Health Principle
Soil compaction Layers of compacted soil on the soil surface (surface crusting) and/or within the subsoil (plow layers) that prevent water movement and root growth	Cover crop mixes with various rooting depths (340)	1, 2, 3, 4
	No-till (329) or reduced-till (345) farming techniques	1, 2, 4
	Short-duration, high-intensity grazing (528)	5
	One-time deep tillage (during initial transition period) * (324)	--
	Mulching (484)	1, 2, 3, 4
	Organic-based soil amendments (compost, manure, biochar, etc.) (590), (484)	3
Poor soil structure Aggregate instability, poor aggregate size distribution, and poor distribution of pore sizes	Cover crop mixes with various rooting depths (340)	1, 2, 3, 4
	Organic-based soil amendments (compost, manure, biochar, etc.) (590), (484)	3
	Diverse crop rotation (cash crop) (328)	1, 3, 4
	No-till (329) or reduced-till (345) farming techniques	1, 2, 4
Lack of biodiversity A lack of diversity among the plants, animals, and soil organisms interacting with the soil	Cover crops (multi species mix) (340)	1, 2, 3, 4
	Diverse crop rotation (cash crop) (328)	1, 3, 4
	Field borders (unharvested crop residue and/or high-residue plantings along field edges; shrub establishment) (386)	1, 2, 3, 4
	Organic-based soil amendments (compost, manure, biochar, etc.) (590), (484)	3
	Minimized use of pesticides (herbicides, insecticides, etc.) (595)	1, 2, 3, 4, 5
	Pollinator habitat establishment (327)	1, 3, 4, 5

* Deep tillage can be utilized where a considerable compaction layer exists that needs to be broken up to allow root penetration. This tillage operation is to be used only one time during the initial transition into a soil health system.