

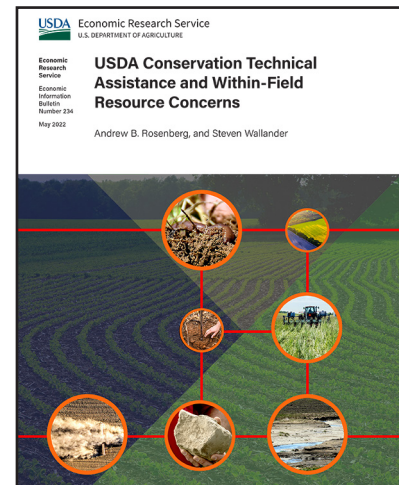


# USDA Conservation Technical Assistance and Within-Field Resource Concerns

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## What Is the Issue?

The U.S. Department of Agriculture's (USDA) working lands conservation programs and technical assistance programs, largely administered by USDA's Natural Resources Conservation Service (NRCS), annually invest about \$5 billion to increase the adoption of conservation practices across the agricultural landscape. Nearly \$2 billion has been allocated per year to conservation technical assistance alone, both as a standalone resource and to support financial assistance programs. At the core of these programs is the resource assessment and planning process. Through this voluntary process, USDA employees work with producers (farmers and ranchers) and landowners to identify and then address resource concerns, such as soil erosion and low organic matter, using a wide range of conservation practices. Many producers have also received technical assistance from several other sources, such as State agencies, conservation districts, technical service providers, and cooperative extension agents. National assessments and inventories such as the National Resources Inventory (NRI), Rapid Carbon Assessment (RaCA), and Conservation Effects Assessment Project (CEAP), are currently conducted for many resource concerns. This bulletin complements existing national inventories of resource concerns by examining the extent of technical assistance participation among fields with specific concerns.



## What Did the Study Find?

This bulletin used information from field-level surveys of farmers (crop producers) growing wheat, soybeans, oats, or cotton—which collectively account for 43 percent of planted cropland in the United States—to examine within-field, soil-related resource concerns.

- Forty-nine percent of the represented fields have at least one self-reported resource concern.
- Water-driven erosion was the most prevalent self-reported resource concern (24 percent of fields). Comparing these estimates to the NRI revealed farmer reporting of resource concerns is consistent with a model-based national inventory.

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- Soil compaction (22 percent of fields), poor drainage (19 percent), and low organic matter (13 percent) were other common self-reported concerns.
- Farmers reported multiple resource concerns for 26 percent of fields.
- Farmers reported at least one concern on 54 percent of the fields in the Midwest region, 52 percent of fields in the West region, 46 percent of fields in the Atlantic region, 45 percent of fields in the Plains regions, and only 25 percent in the South region.
- In the West region, wind-driven erosion and low organic matter were the most prevalent self-reported concerns, while in the Midwest, South, and Atlantic regions, water-driven erosion, soil compaction, and poor drainage were most prevalent.

USDA technical assistance supports the adoption of conservation practices to address producer resource concerns through its nine-step planning process. Producers can also seek assistance from several other partners and sources. The data in this bulletin reveal the extent of technical assistance for a large fraction of cropland by resource concern, region, and source of assistance.

- Farmers received technical assistance from a Federal or non-Federal source for 24 percent of fields with at least one untreated resource concern. Over one-third (37 percent) of represented fields have a self-reported resource concern but have not yet received assistance.
- Farmers were more likely to receive technical assistance to treat water-driven erosion (30 percent of fields reporting water-driven erosion) than for soil compaction (18 percent).
- Farmers were twice as likely to receive technical assistance on fields with three or more self-reported resource concerns compared with fields having one resource concern.
- USDA's NRCS was a source of technical assistance for 67 percent of the fields that obtained assistance, followed by other local sources (36 percent) and the Cooperative Extension Service (19 percent). Some fields received assistance from multiple sources (25 percent).
- The Cooperative Extension Service was used as a source of assistance more often in the Atlantic and Southern regions and less often in the Midwest, Plains, and West regions.

## How Was the Study Conducted?

To examine the prevalence of resource concerns and technical assistance, this bulletin used the Agricultural Resource Management Survey (ARMS), an annual survey of farm production practices conducted jointly by USDA's Economic Research Service and National Agricultural Statistics Service agencies. Specifically, this research used data from the Production Practices and Cost Report, a crop-specific, field-level version of ARMS, which surveys growers of different crops each year on a rotating basis. This bulletin used four versions of the survey: oats (2015), cotton (2015), wheat (2017), and soybeans (2018). These ARMS versions asked farmers whether they have any of a set of within-field soil and water resource concerns, and if they received technical assistance to evaluate each concern on the surveyed field. Finally, if a farmer received technical assistance for a particular concern, the farmer was asked about the source of assistance received. The data represent the first national-level assessment of self-reported resource concerns and technical assistance.