

*Commentary***Soil conservation techniques and conservation tillage****Catherine Paul***

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ABOUT THE STUDY

Preventing soil loss through erosion or decreased fertility due to excessive use, acidification, salinization, or other chemical soil degradation is known as soil conservation.

Farmers are particularly concerned about soil conservation since it is essential to use land economically, generating high yields, as well as to be able to do so in the future. Even though the advantages of soil conservation may not be immediately apparent, future generations will benefit from them. By using integrated weed and pest control approaches, various soil conservation strategies help to reduce erosion, maintain fertility, prevent degradation, and reduce natural pollution brought on by pesticides. Soil conservation techniques contribute a significant amount to the environment's and resources sustainability. Preserving the biodiversity of the eco-communities that live on the soil, each of which contributes in its own distinctive manner to its fertility, is a prime priority of soil conservation. They facilitate water infiltration and aeration, add organic matter, split decomposing organisms to release nutrients, and add organic matter. Since microbes modify the organic matter for plant needs, ensuring ideal conditions for living organisms in the earth is essential for vegetation that develops within. The biodiversity of the eco-communities that live on the soil, each of which contributes in its own distinctive manner to its fertility, is a prime priority of soil conservation. They facilitate water infiltration and aeration, add organic matter, split decomposing organisms to release nutrients, and add organic matter. Since microbes modify the organic matter for plant needs, ensuring ideal conditions for living organisms in the earth is essential for vegetation that develops within. A variety of soil conservation practices shield bare surfaces from erosion and cracking carried

on by water, wind, and extreme heat. They also prevent earth runoff, pollution, and sedimentation in water sources. Ground layers serve as natural filters to improve the quality of water, which further correlates the significance of soil conservation to water supply. Water itself is required to dissolve plant nutrients. Developing land resources wisely guarantees their availability for subsequent generations and, thus, lowers food prices. Another factor is aesthetics, since lush vegetation landscape is significantly more pleasing to the sight than damage is repaired and abandoned areas.

Soil conservation tillage

No-till, strip till, ridge till, and mulch till systems are all examples of conservation tillage, often known as minimum tillage. After tillage activities, such techniques maintain plant residues on at least 30% of the topsoil surface. Various types of land are cultivated. Along with more traditional processes, conservation tillage is being used more frequently these days. Conservation tillage, when used in combination with the introduction of crop surveillance systems, can be a viable technique for preserving soil, producing sufficient harvests, and promoting the sustainability of agriculture. Let's examine the main uses, types, and implications of conservation tillage on the quality of the land in more particular. Humans will also evaluate the advantages and disadvantages of this strategy from an agricultural, economic, and ethical point of view. These techniques, like other tillage methods, have benefits and drawbacks. It depends on the type of crop planted, the features of the region, and the environmental factors. The method of agricultural production is recognized by its various depths. The type of tillage can be minimal, strip, ridge, mulch, and zero. The selection of a conservation tillage method is influenced by the optimum field conditions for a certain plant. In essence, it involves modifying the soil to improve crop yields.

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