The productive agricultural lands of the United States are being seriously impaired and even destroyed on a vast scale. The plant nutrients and the soil body itself are being removed from fields and over-grazed ranges at an ever-increasing rate under existing methods of unwise land usage, with the effect not only of impoverishing and even destroying the uplands but of covering fertile lower slopes and productive alluvial plains with poor subsoil material washed out of the hills. Moreover, the products of erosion are filling stream channels and costly reservoirs; increased runoff from soil-stripped, gully-riddled slopes is increasing the hazard of floods; and many streams muddied with silt and colloidal clay have been deserted by valuable species of fish. This irreparable damage is increasing at an accelerated rate. Centuries would be required to build back the soil swept out of the fields and overgrazed pastures of the nation by this process that continues with every rain heavy enough to cause water to run downhill. We have been maintaining our agricultural production at the expense of the substance of the land.

The average citizen is unacquainted with the gigantic proportions of this devastating agency of uncontrolled erosion by wind and water. Educators, business men and statesmen, even our specialists—many of our engineers and agricultural experts—do not yet realize that more than 75 per cent. of the country consists of sloping land, all of which is subject to erosion in some degree where used for clean-tilled crops or where subjected to unwise grazing. Nor is it generally known that the average depth of the more productive topsoil of these erosive lands is only about 7 or 8 inches, or that this thin covering, representing the farmer's principal capital, is being swept

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1 Presented before Section O, American Association for the Advancement of Science, Pittsburgh, Pa., December 28, 1934.
Editor's Summary

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