Some differences of opinion exist concerning the advisability or necessity of applying sulfur to soils in order to increase their productiveness. Data have been presented by investigators showing both beneficial and detrimental effects on the growth of certain plants from its application in one form or another. Whether the stimulative or depressive action, as the case may be, is a direct or an indirect one, or both, is more or less a matter of conjecture at the present time.

In considering the relation of sulfur to soils, whether it be from the standpoint of sulfur conservation or from the effects that this constituent may have on bacterial or higher plant activity, the quantity of sulfur supplied to the soil in the rainwater must be taken into account. This fact has been recognized by a number of workers and analyses of the rain falling in many parts of the world have been made to determine its sulfur content. At Ithaca, where the rainwater has been analyzed for a number of years for certain constituents, sulfur has been determined for two years, the results of which are herein reported.

Miller found the rain falling at Rothamsted, England, to contain a yearly average of 17.41 pounds of sulfur (SO₃) to the acre. He reports Gray, working at Lincoln, New Zealand, and Sestini at Catania, Sicily, to have found 14.94 and 20.89 pounds, respectively.

At Leeds, England, Crowther and Ruston report the atmospheric precipitation to be extremely high in sulfur. The rain falling at eleven stations for a period of one year in and near the city contained, on an average, 161.27 pounds SO₃ calculated to the acre basis. At one station near the industrial area of the city the sulfur content was as high as 336 pounds. While most of the sulfur was present in the form of sulfate, appreciable amounts of sulfur dioxid and hydrogen sulfid were always found. At Garforth, 6 miles east of Leeds, these same authors report the annual precipitation of sulfur