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Adding nitrogen
fertilizer
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Nitrogen Fertilizers Are Bad for The Soil

Large quantities - bad. Small ones - good

For decades now, the United States used nitrogen-based fertilizers, believing that it would benefit the soil by building organic carbon into it; but a group of scientists studying the soil has recently found that nitrogen actually fertilizers deplete the carbon reserves from it. Scientist from the University of Illinois, became interested in the problem while reviewing corn growth, and the production rates, only to discover that, although an enormous amount of nitrogen based fertilizer was being used, the yield in the Morrow Plots was lower by 20 percent than the production for the south end of the Morrow Plots where rotating cultures of corn-oats-hay were being cultivated. To better understand why culture growth is lower, researchers analyzed organic carbon soil samples, and discovered that the decline carbon quantities in the soil has began as soon as 1950, when synthetic nitrogen fertilizers started being used. The practice of fertilizing the soil with synthetic nitrogen became widespread in the 70's, when it was recommended to be used so that the risk of nitrogen depletion would minimize. Unfortunately, nitrogen fertilizers where used in great quantities, in the hope of better crop growth. Nitrogen fertilizers are good for agriculture, but in ever increased quantities this produces a decline in organic carbon in the soil, which in terms will determine crop decline as well. Carbon is a key element in culture growth, helping the soil store more water. On the other side, using excessive quantities of nitrogen fertilizers increases nitrate pollution and contributes to the release of more carbon dioxide into the Earth's atmosphere, carbon dioxide being one of the greenhouse effect gases. The findings in Morrows Plot, and compared data from Iowa and Illinois from 1994 to 2001, support the scientists' findings; the use of large quantities of inefficient nitrogen based fertilizers translate into 68 million dollars spent every year by the farmers.