

The USDA SCS has recently released an informative report on the depletion of soils on farms in the Northeast Iowa River Basin, according to Keith Krause ^{D.C. w/ Del. Co. SCS} ~~SCS & WDC~~. The N.E. Iowa River Basin contains 5.4 million acres with 73% being used for cropland. The area is predominantly rural with non-specialized grain and livestock farms. Sixty-one different soil types were represented in the study area. The purpose of this study was to indicate how excessive erosion of these 61 soil types affects farm income ^{over} ~~for~~ the next 25 years.

According to the study, increased fuel & fertilizer consumption and decreased productivity directly affects farm income. Many times farmers don't see the effects of reduced production due to soil erosion because improved technology & production simply have ~~not~~ ^{been able to} compensate for this loss.

As noted in the study, the trend of agriculture land use is toward more intense farming. ~~and~~ Soil conserving meadow-crops are being replaced ^{by} row-crop rotations. Row-crop acreage increased nearly 34% from ¹⁹62-72 and 33% from 1972-1982. The result is increased soil erosion and depletion of natural ^{soil} productivity. Krause says

Shut and rill erosion by water is the most significant erosion problem due to a gradual removal of productive topsoil to the generally less productive subsoil. Many soils in the N.E. Iowa River Basin such as the Nordness &

Dubueque, were formed with a shallow layer of topsoil. Sizable acreages of these soils have already been depleted to the point they can't economically be used for row crop production. Soils with deeper topsoils and more favorable subsoils have been kept productive by the increased usage ~~of~~ of fertilizer, adds Krause

Data in the survey indicates that the cost of depletion, or reduction in income is accumulative and generally nonreversible. As erosion rates continue to exceed tolerable levels, the top layers of the soil profile will erode away. The reduced income is related to these changes in the soil profile.

Results

Survey results indicate that about 53% of cropland or 2.1 million acres is eroding at a greater rate than it can replenish itself. As a result ^{of this depletion} additional fertilizer will cost an estimated \$4.3 million by the year 2010. The application of these fertilizers will not maintain yields at present levels. Yields go down with depletion even though fertilizer applications increase.

(Finish from top of page 3)
to end on pg. 4