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### The impact of cropland conversion on environmental effect in the Loess Plateau: a pilot study based on the national experimental bases

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Conversion of cropland to forestry and grassland is an important method to reduce soil erosion and improve the biophysical environment in the Loess Plateau. The feasibility, methods, and environmental effects of cropland conversion were studied based on 11 typical watersheds of national experimental bases instead of different geographic areas of the Loess Plateau. Between 1986 and 2000, cropland, sloping cropland and non-agricultural land decreased by 8%, 92.5% and 8% respectively, while forestry increased by 15.7%. The land use change not only decreased annual soil erosion by 74%, but also increased vegetation coverage by 100% and improved the soil condition and biodiversity. This can be achieved by building basic farmland, increasing capital and scientific input, and planting trees and grasses according to the natural biophysical restrictions.

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**关键词:** Loess Plateau; land use and cover change; cropland conversion; environmental effect doi: 10.1360/gso50412