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## The impact of dynamic change of cropland on grain production in Jilin

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The quantity and quality changes of cropland in Jilin province are analyzed by combining the statistics from 1949 to 1999 and land-use maps interpreted from TM images in 1986 and in 2000. In general, the decreasing trend of the cropland in Jilin province was derived from the statistic data in 1949-1999. While since 1983, the cropland area has increased slightly, because of the conversion from other land-use types to cropland. It is showed that the net increase of cropland was about  $43.40 \times 10^4$  ha. While the quality change of the cropland can be seen from that mainly caused by the conversion from forestland, grassland to cropland and the change mainly took place in the west, where it is ecologically fragile. According to the spatial distribution model, the centroids' move of the cropland and the grain production are calculated, whose directions are not consistent. The impact of the dynamic change of the cropland on food security is further analyzed.

Paper (PDF)

**关键词:** dynamic change; cropland; temporal-spatial change; GIS; RS; Jilin province doi: 10.1360/gso40107