Study on the Secular Changes of Agricultural Structure in Xinjiang Using Satellite Remote Sensing

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Before Rural reform, Xinjiang had been an emphasis on food production, After rural reform, Under the policy of agricultural production of autonomous government of "actively develop a diversified management while maintaining the food production ", Acreage of food crops has been decreasing by the increased production of cash crops, mainly cotton in recent years, food security has becoming an important issue in Xinjiang. In this study, we have analyzed the secular changes of agricultural structure in Xinjiang by using the local aspirations for each province, The Statistical Yearbooks for each year, and digitizing the printed materials. The result shows that the amount of food production has been increasing continuously, Acreage increasing is not observed from around 1960, It is on the decline since 1968. Acreage of food production in Xinjiang was 2347.80000ha in 1960, a percentage of the total acreage was 84.5%, including cotton. But in 2008, Acreage of food production becomes 1649.90000ha, percentage of total acreage was only 38.3%.From the spatial variation of food production in Xinjiang, it was confirmed that even in the amount of food production, or in the amount of food produced per unit area , in the 1990s it was mainly in the southern part of Xinjiang, and then in 2008, that the area of food production has expanded to almost area of Xinjiang; Period classification and spatial analysis hereinbefore was based on statistical data analysis. Here we extracted the area of winter wheat which is the main food crops in Xinjiang using SPOT / VEGETATION data, With analysis the secular changes of agricultural structure in Xinjiang, and then the analyzed results is confirmed by the statistical information.

Keywords: Xinjiang, Remote sensing, Agricultural Structure, Period classification, Spatial analysis