

小麦多年产量空间变异与空间关联分析 Spatial Autocorrelation Analysis of Wheat Yield over Five Years

陈云坪 王秀 马伟 赵春江

电子科技大学

关键词: 小麦产量 空间相关性 自相关

摘要: 利用全局空间统计方法Moran's I和局部空间统计方法LISA研究了小汤山国家精准农业基地2001~2006年小麦产量及两种气候模式下产量的空间变异和空间关联。研究表明,不同年份产量及气候模式下均存在极显著的空间自相关;全局和局部空间自相关分析表明,试验地块的东北部、西部和南部区域存在极显著的空间自相关,但东北部和西部区域在不同的气候模式下产量变化幅度较大,而南部区域产量趋于稳定。 Spatial correlation of wheat yield and yield pattern changes under two weather scenarios had been analyzed using Moran's I and LISA. The results indicated there were most significant spatial autocorrelations among different yield patterns. Statistically, wheat yields were highly spatially correlated in cold years. With global and local spatial statistics, LISA map of yield differences in two weather patterns, stable and unstable yield areas were identified. Most significant spatial autocorrelations had been found in the northeast, west and south region. The northeast and west region of the field tended to be unstable, while the south region tended to be stable between different weather patterns.

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