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# 南方大豆核心种质主要农艺及产量性状的表型多样性到：

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**Title:** Evaluation on Main Agronomic and Yield Characters of Soybean Core Collections in Southern China

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**关键词:** 大豆; 核心种质; 多样性; 主成分分析; 聚类分析

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**摘要:** 对南方大豆150份核心种质的15个主要农艺及产量性状进行表型多样性分析。结果表明:底荚高度、株高、有效分枝数的变异系数均在30%以上,单株粒数、单株荚数、百粒重、单株粒重、单位面积产量的变异系数均在20%以上;主成分分析结果表明,前5个主成分对变异的累计贡献率达88.432%,而其数量性状的差异主要是由生育期结构性状引起的;不同性状的多样性指数不同,同一性状在不同生态区种群中的多样性也不同;经聚类分析,南方大豆核心种质7个生态区域种群可划分为3组;随着纬度的升高,不同来源地大豆种质平均单位面积产量呈先增加后降低的趋势;筛选到大豆优异种质12份,并提出了其在生产和育种上的应用前景。

**Abstract:** Morphological diversity of soybean core collections in southern China were

analyzed using 15 main agronomic and yield characters. The results showed that the coefficient variance were higher than 30% for pod height at bottom, plant height and effective branch number, while was higher than 20% for seed number per plant, pod number per plant, 100-seed weight, seed weight per plant and yield per unit area. Principal component analysis indicated that the first five components accounted for 88.432% of total variation, and the variation of growth period characters were main factors that arousing difference for other quantity characters. Diversity index varied with characters, and the same character also showed distinction in different ecological region populations. Clustering analysis showed that soybean core collections from seven ecological regions was clustered into three groups. With the increase of latitude, the mean yield per unit area showed increasing and then decreasing trend. Twelve excellent soybean germplasm were selected from 150 accessions, and their utilization in breeding programs were prospected.

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