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辽宁省野生大豆种质资源的SSR遗传多样性分析

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摘要: 以30份2007年辽宁省的野生大豆种质资源为材料,利用40对SSR引物进行遗传多样性分析。结果表明: 18对SSR引物扩增出129个等位变异,平均每个位点等位变异7.22个,Shannon-Weaver指数变化范围为1.1753~2.1234,平均为1.7285。中部平原半湿润区内的种质数、平均等位变异数和遗传多样性指数最高,其次为东部山地湿润区,西部丘陵半干旱区内分布种质数最少,其平均等位变异数和遗传多样性指数均最低。中部平原半湿润区和东部山地湿润区之间的遗传相似性最高(0.6496),遗传距离最近(0.4314),而西北部平原低丘半湿润区和西部丘陵半干旱区之间的遗传相似性最低(0.4326),遗传距离最远(0.8379)。聚类结果看到SSR分子标记的结果与品种的地理来源没有明显的相关性。

Abstract: In order to evaluate the genetic diversity of the wild soybean(Glycine soja) in the different region of Liaoning Province, China, a total of 30 wild soybean accessions from 5 ecological regions(semi-humid zone of plain in the centre, semi-humid zone of low hill in the south, semi-humid zone of plain and low hills in the northwest, semi-arid zone of hill in the west, and humid zone of mountainous lands in the east, abbreviated as region I, II, III, IV and V, respectively)of Liaoning province in 2007 were genotyped using 40 pair of SSR primers. 129 alleles were detected by 18 pair of SSR markers, with an average of 7.2 alleles for each locus. Shannon-Weaver diversity indexes varied from 1.1753 to 2.1234 with averaged 1.7285. The region I had the most germplasmas, the alleles and the highest genetic diversity, followed by the region V and the region IV had the least and the lowest. The value of genetic similarity was highest(0.6496)while the value of genetic distance was the lowest(0.4314)between the region I and V. The value of genetic similarity was the lowest(0.4326)while the value of genetic distance was highest(0.8379)between the region III and IV. There was no relativity between the results by the SSR markers and geographic origin by cluster analysis.

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