

藏鸡群体遗传多样性研究 Genetic Diversity in Tibetan Chicken

杜志强^{1,2}, 曲鲁江¹, 李显耀¹, 胡晓湘², 黄银花², 李宁², 杨宁¹ DU Zhi-Qiang^{1,2}, QU Lu-Jiang¹, LI Xian-Yao¹, HU Xiao-Xiang², HUANG Yin-Hua², LI Ning², YANG Ning¹

1. 中国农业大学动物科技学院, 北京 100094; 2. 中国农业大学农业生物技术国家重点实验室, 北京 100094. College of Animal Science and Technology, China Agricultural University, Beijing 100094, China; 2. State Key Laboratory for Agrobiotechnology, China Agricultural University, Beijing 100094, China

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摘要 藏鸡的体型外貌和生活习性与红色原鸡非常相似, 是具有自己独特群体遗传特性的高原地方鸡种。为了有效保护并合理利用这一遗传资源, 我们采用多重PCR与半自动荧光标记微卫星聚丙烯酰胺凝胶电泳相结合的方法检测了20个微卫星基因座的多态性, 并随机抽取藏鸡群体中部分个体进行个体体形特征与生产性能的统计。结果表明藏鸡群体的20个微卫星基因座的多态等位基因数为4~10个, 平均值为7.25个/基因座, 多态信息含量(CPI)和杂合度(H)平均值分别为0.67、0.74。大染色体较小染色体的微卫星标记多态性程度要高。藏鸡群体的微卫星基因座多态性丰富, 也解释了生产性能不均, 外貌表现迥异的群体遗传特性。
Abstract: Morphological traits and living habit of Tibetan chicken, which is an aboriginal chicken breed on plateau with its own characteristic populational genetic features, are in great common with the Red Jungle Fowl, the assumed ancestry of domestic chicken. To fully exploit this chicken resource, Multiplex PCR with semi-automated polyacrilamide gel electrophoresis (PAGE) using fluorescently labeled microsatellite primers was used to detect the polymorphism at 20 microsatellite loci. At the same time, we randomly test the individual morphology and performance. It showed that numbers of polymorphic alleles were 4-10, with mean value 7.25 per locus. Polymorphism Information Content (CPI) and Heterozygosity (H) had mean values 0.67 and 0.74, respectively. Macrochromosomes had relatively higher polymorphism than microchromosomes ($P > 0.05$). In all, high polymorphisms at microsatellite loci related to the uneven production performance and morphological discrepancy of population genetic characteristics in Tibetan chicken.

关键词 藏鸡 多重PCR 微卫星标记多态性 群体遗传 **Key words** Tibetan chicken multiplex PCR microsatellite polymorphism population genetics

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