

Building a quality niche for caribbean hot peppers

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Abstract

Capsicum chinense Jacq. (hot pepper) is indigenous to the Caribbean and tropical South America. Of the five domesticated pepper species grown in the Americas, it is the most commercially important species in the West Indies. Caribbean cultivars are well known worldwide for their high pungency and unique flavour profile. To establish a geographical indication for the purposes of branding hot pepper requires genetic characterisation of the Caribbean hot pepper germplasm. In the present study, *C. chinense* accessions representing seven geographical regions, were genotyped using nine nuclear microsatellite markers and 138 RAPD (random amplification of polymorphic DNA) markers. These two molecular markers identified the areas of greatest variability as being located in the Amazon region. However, further cluster analysis revealed that regions within the Caribbean are caretakers of unique variability for the species. Finally, the study pieces together various molecular clues, unraveling the evolutionary journey of one of the most charismatic species in the New World.