

Abstract:

Citrullus colocynthis, is a herbaceous plant of the Cucurbitaceae family, and the primary source of *Citrullus colocynthis* is archipelago located in the southern part of Bhutan. As a food vegetable, and for its medicinal properties, including a therapeutic effect in patients with diabetes, and cholesterol-lowering effect in patients with hypercholesterolemia, *Citrullus colocynthis* is important, and is cultivated in tropical and subtropical areas. In this study, to study the genetic diversity of *Citrullus colocynthis* Native Masses, Simple sequence repeat marker or (SSR) was used. The SSR is the most widely used Marker that is very diverse, distributed in eukaryotic genomes, and is dedicated to the locus. In this study, the population studied, *Citrullus colocynthis* was collected randomly from native masses of 8 regions in Sistan and Baluchestan. Extracting DNA from samples was performed by using as cetyl trimethyl ammonium bromide method (CTAB). A total of 10 primers were designed and used in this study. Polymerase chain reaction was studied using DNA extracted and 10 primers. For the analysis of genetic data, NTSYS pc ver 2/2 and Genalex 6.5 and XLSTAT software was used. According to the data analysis among cultivars studied, and because of that, 7 primer of 10 primers used in the study showed polymorphism among the studied samples, it was not possible to classify them. Thus, results of the present study confirm the great genetic variation in under study samples of *Citrullus colocynthis* plant. It seems that this genetic diversity is probably unique to Sistan and Baluchestan Province and in general to our country and Iran plateau.

Keywords: *Citrullus colocynthis*, genetic diversity, SSR molecular marker



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Study of genetic diversity in landraces of
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marker

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