



African Journal of Food Science and Technology (ISSN: 2141-5455)  
Vol. 12(3) pp.01, April, 2021 Available online  
@<https://www.interestjournals.org/food-science-technology.html>  
DOI: 10.14303/ajfst.2021.20  
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## *Commentary*

# Genetic diversity of potato

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### **Genetic Diversity and Its Importance**

Genetic diversity is the all the changeability happening among the singular of a species. In the organization of diversity genetic diversity is located after environment and species diversity. Genetic diversity is important for living of crop plants and their betterment. Diversity in plant genetic root gives opportunity for plant breeders to evolve new and improved mixture with desirable attribute, such as and disease resistance abiotic stress resistance and photo insensitivity, high yield potential, pest etc. Later the focus change to bring forth excess amount of food for growing populations. At present, the focus is on both production and quality prospect of leading food crops to meet the necessitates of increasing population to give well-balanced diet. With ever-changing climatic scenario, improvement of mixture which can resist to climatic changes is becoming more essential.

### **Genetic Diversity Analysis in Potato**

The classification of genetic diversity within and between plant populations of potato is specifically done using following techniques; morphological, biochemical evaluation and molecular marker analysis. Molecular Markers can show similar modes of hereditary pattern, as we notice for any other characters that is, dominant or co-dominant. In general, co-dominant markers are extremely instructive than the dominant markers (Contreras et al. 1993).

### **Morphological markers**

Morphological markers are based on optical noticeable characters such as plant height, growth habits, pigmentation, stem colour, flower color etc. These marker attribute are often sensitized to phenotypic plasticity; conversely, this allows classification of genetic diversity in the existence of environmental fluctuation which cannot be avoided from the genotypic variation. These types of markers are still having benefits and they are compulsory for distinguishing the adult plants from their genetic impurity arises from various ways like mechanical mixtures, natural out-crossing etc (Fry, 2007).

### **DNA (or molecular) marker analysis**

Molecular markers placed only near or coupled to genes governing those attributes, so they do not impact the phenotype of the characters of interest. These molecular markers are genetic both in dominant and co-dominant patterns. Various markers have various genetic qualities like dominant or co-dominant, can compute anonymous or characterized loci, can include expressed or non-expressed sequences, etc. Existence of genetic variableness in potato is must for its further improvement by Giving options for the potato breeders to evolve new collection and hybrids. This can be achieved through morphological and molecular depiction of plant genetic root. Improvement and usage of subsets like core and minicore collection of big sized germplasm stand for the diversity of the Whole grouping of the species is important as it may boundary their use in breeding. Molecular markers are very essential tools for measurement the diversity of potato. Low assay cost, convenience, ease of assay development, affordable hardware, throughput, and automation are essential factors when pick out a technology. Now quality information is producing in fast way with the help of high throughput molecular marker technologies. So it is accomplishable to qualify the huge amount of germplasm with less time and resources. NGS decreases the cost and time needed for sequencing the entire genome of any being (Hanneman, 1989).

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