

## Author's Accepted Manuscript

Molecular Diversity of Tomato Germplasm (*Lycopersicon esculentum* L.) using Lycopene Specific Markers

Monika Singh, Vaishali, A.K Singh, Ajay Kumar, K.D Pandey



[www.elsevier.com/locate/bab](http://www.elsevier.com/locate/bab)

PII: S1878-8181(18)30450-X  
DOI: <https://doi.org/10.1016/j.bcab.2018.08.017>  
Reference: BCAB850

To appear in: *Biocatalysis and Agricultural Biotechnology*

Received date: 5 July 2018  
Revised date: 22 August 2018  
Accepted date: 28 August 2018

Cite this article as: Monika Singh, Vaishali, A.K Singh, Ajay Kumar and K.D Pandey, Molecular Diversity of Tomato Germplasm (*Lycopersicon esculentum* L.) using Lycopene Specific Markers, *Biocatalysis and Agricultural Biotechnology*, <https://doi.org/10.1016/j.bcab.2018.08.017>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting galley proof before it is published in its final citable form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

## **Molecular Diversity of Tomato Germplasm (*Lycopersicum esculentum* L.) using Lycopene Specific Markers**

Monika Singh<sup>1</sup>, Vaishali<sup>2</sup>, A.K Singh<sup>3</sup>, Ajay Kumar<sup>1</sup>, K.D Pandey<sup>1\*</sup>

<sup>1</sup>Department of Botany, Institute of Science, Banaras Hindu University, Varanasi-221005

<sup>2</sup>Department of Biotechnology, College of Agriculture, Sardar Vallabhbhai Patel University of Agriculture and Technology, Modipuram, Meerut- 250110

<sup>3</sup>Krishi Vigyan Kendra, Sant Kabir Nagar-272175

\*Corresponding author. Centre of Advanced Study in Botany, Institute of Science, Banaras Hindu University, Varanasi-221005, India. Mobile-91-9450547298; Fax No-91-542-2368174. kdp\_bhu@yahoo.com

### **Abstract**

Phenotypic and genetic diversity of genotype collections are important for germplasm conservation of a species. Characterization of morphologically much diversified materials with molecular markers offers a unique opportunity to define significant marker-trait associations of biological and agronomical interest. Twenty four genotype of tomato were collected and screened with four lycopene gene specific primers in order to determine the genetic diversity. Cluster analysis based on lycopene gene specific marker and morphological traits showed two distinct groups. In both the dendrograms, the second cluster did not show any similarity with each other. Lycopene gene specific marker and phenotypic traits based dendrograms revealed that some of the genotypes were closely related while the others were placed at distance in both the dendrograms. The lycopene specific primers similarity coefficient based similar genotypes in a cluster, and fruit yield and related phenotypic traits based clusters of different genotypes may be screened in quality genetic breeding programmes.

Download English Version:

<https://daneshyari.com/en/article/9954355>

Download Persian Version:

<https://daneshyari.com/article/9954355>

[Daneshyari.com](https://daneshyari.com)