

Exploring Biotechnological Advances in Nutritional Enrichment of Solanaceous Crops

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Abstract: Solanaceous vegetables include vitamins C, A, E, thiamine, niacin, pyridoxine, folacin, minerals, and fiber, making them important for human nutrition. Besides providing nutrition, veggies provide diversity and make meals appealing with their color, texture, and taste. Rich in minerals, vitamins, and phytonutrients, they are called protective foods. Traditionally, crop development programs have prioritized yield and disease resistance above nutrition. Major antioxidants from solanaceous plants like rely on consumer approval. Plant breeding relies on nutritional qualities to assess plant product appropriateness for diverse purposes and economic output. Total soluble solids, acidity, ascorbic acid, carotenoids, lycopene, vitamin C, reducing sugar, and dry matter hereditary non-additive and overdominance in tomatoes Kalloo Tomatoes, brinjal, chilli, sweet pepper, and potatoes are perennial favorites. Solanaceous vegetables include vitamins, minerals, phytonutrients, antioxidants, flavanoids, carbohydrates, proteins, and lipids. Tomatoes and chillies should be bred for ascorbic acid and other nutrients. AC-588-1 has the greatest antioxidant content among chilli cultivars, followed by BCC-62 and AC 465. These cultivars may be employed in future breeding programmes. As both additive and non-additive genetic components inherited anthocyanin in brinjal, reciprocal recurrent selection may increase this trait.

Keywords: Solanaceous vegetables, Nutritional enhancement, Biofortification