

Abstract:

Leafy or salad vegetables are mainly eaten in fresh form. They are highly diverse in species, varieties and agro-ecological requirements. Leafy vegetables are high in water and moderate to high in vitamins, minerals and dietary fibre. Conventionally, the external qualities and some internal qualities are the price determinants of fresh leafy vegetables. However the present trend for the demand for health food has created a substantial demand for internal qualities, especially which are related to nutritional and functional values. In addition to the direct nutritional value, the functional properties indirectly improve the human health. However, the composition of anti-nutritional or toxic compounds sometimes makes them inferior.

Genetic entity of the crop and the growing environment determine the composition of nutritionally and functionally valuable compounds in leafy vegetables. Basically the ontogenic stage and the plant part determine the composition of vitamins, minerals and some anti-nutritional constituents such as nitrates and oxalates. Then the environmental factors, predominantly temperature, light and mineral nutrition at the late stages of crop growth highly influence the composition of these compounds. Cultural requirements such as mulching, irrigation, pest management and harvesting play a significant role in determining the composition of nutritional value, especially in terms of dietary fibre and pesticide residues.

Hence proper selection and control of environmental conditions and management practices at pre-harvest stages is primarily needed for achieving the goal of nutritionally and functionally high quality leafy vegetables.