

Dietary importance of some unusual leafy plants

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Abstract:

Unusual leafy plants like *Oxalis corniculata*, *oxalis latifolia* and *Bauhinia purpurea* are the sources of nutrients for the body of human beings. Leafy plants are rich in dietary fibers, iron, calcium and vitamin C. Vitamin C of some of the unusual leafy plants was found to be considerably high. They can be included in the diet.

Keywords: Unusual, nutrients, dietary fibers, Leafy plants

Introduction

Leafy plants are the source of major and minor elements. They are typically low in calories and fat. They have high protein content dietary fiber, vitamin C, Vitamin K, Vitamin A. Due to presence of phyloquinone content of leaves leaves contain high amount of vitamin K. They have chlorophyll content due to which they have their role in photosynthesis. Due to presence of chlorophyll they have occupied strategic position among the living organisms. The term vegetable includes all foods of vegetable origin, but the definitions now exclude cereals and dried seeds of pulses. Regular use of leafy vegetables supplies many of the most essential health building and protecting substances, such as vitamins and minerals. Food is a source of essential nutrients requires for health promotion and disease prevention. Increases in amount of natural dietary products are the basic necessity of human body for fighting against the diseases. These products produce antioxidants. (Barlow, 1990; Rice- Evans *et. al.* 1997). Among the various enzymatic and non-enzymatic parameters of antioxidants, vitamin C is one of the important, most powerful antioxidants (Smirnoff, 1996; Arrigoni and de Tullio, 2000; Horemans *et. al.* 2000b.). Vitamin C deficiency exacerbates atherogenesis in animal's models. In order to protect the body from degeneration of diseases, vegetables play an important role (Ogunlesi M., & *et. al.* (2010). Vitamin C is naturally synthesized

in the body of human being, it is not synthesized endogenously and therefore it has to be consumed through leafy vegetables. (LIY and Schell horn H.E. (2007) Food and Nutrition Board at the Institute of Medicine (IOM) of the National Academies (formerly National Academy of Sciences) recommended dietary intake for Ascorbic acid in the daily diet. (2000). There are many crops cultivated as vegetables suitable for different seasons and climate. But it appears that the people are not having a full choice for their tastes and requirements or they are not getting these according to their need in the season, and therefore people got diverted for the use of other plant parts of the crops that are found growing as wild plants and some as weeds. (Bhaskar and Bhore (1961). The weeds like *Boerhaavia diffusa*, *Chenopodium album*, *Portulaca oleracea*, *Tamarindus indica*, *Oxalis corniculata*, *oxalis latifolia*, *Bauhinia purpurea* and *Alternanthera triandra* were selected for the experiments, are consumed as unusual vegetables (Chauhan, (1989).

Material and methods

Eight types of leafy plant vegetables were selected for analysis of Reducing sugar, polyphenols and Ascorbic acid. These were *Oxalis corniculata*, *oxalis latifolia*, *Bauhinia purpurea*. The plant material neatly washed in tap water. The analysis of Vitamin C (Ascorbic acid) in all the leafy samples were carried out by Sadasivan and They moli Balasubramenan, (1987) Polyphenols (Farkas and Kiraly, 1962) Reducing sugar. (Nelson, 1944)

Result and discussion



Sr. No.	Name of the plant	Reducing Sugars		Polyphenols		Vitamin C (Ascorbic Acid) mg/g	
		Tender	Mature	Tender	Mature	Tender	Mature
1	<i>Oxalis corniculata</i>	16.2162	88.2882	72.4454	532.6876	81.6314	122.4492
2	<i>Oxalis latifolia</i>	14.4144	153.153	95.8836	532.6876	122.4492	61.2246
3	<i>Bauhinia purpurea</i>	61.2612	309.9098	257.627	329.2978	102.0410	40.8164

Maximum amount of Ascorbic acid was found in tender leaves of *oxalis latifolia* and mature leaves of *Oxalis corniculata*. The reducing sugar of these two ranges in between about 14 to 88 mg.

The polyphenolic contents of *Oxalis corniculata* was maximum while that of *Oxalis latifolia* was moderate. These two plants were followed by Bauhinia tender leaves. Ascorbic acid, reducing sugars as well as polyphenolic contents is with moderate value. Among the unusual leafy vegetables, the highest level of vitamin C was recorded in the leaves of *Oxalis*. Vitamin C contents of all these plants under study were found to be considerably high so it is advisory to include them in day to day diet. The person who suffers from deficiency of vitamin C. should consume the *Boerhaavia diffusa* and oxalis leaves as a vegetable in their diet.

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