**INTRODUCTION**

Green leafy vegetables are rich in carotenoids (Vitamins) as well as in iron, calcium, ascorbic acid, riboflavin folic and appreciable amounts of other minerals. Vegetables occupy an important place in the vegetarian diets of India. India having a variety of natural surroundings and varying climates and seasons, has a number of species of edible leafy vegetables such as spinach, amaranthus, bengal gram leaves, cauliflower leaves, mint and coriander. These leafy vegetables and herbs are relatively inexpensive, easily and quickly cooked and rich in several nutrients especially beta-carotene and iron which are essential for human health. Protein malnutrition is still prevalent in the developing countries of the world. Micronutrient deficiencies affect mainly women and children and contribute significantly to the global disease burden of children by limiting proper cognitive development, impairing physical development, and increasing susceptibility to infectious diseases. Most countries in Africa are still struggling to address problems of under-nutrition and micronutrient deficiencies. They are highly nutritious, contain vitamins and minerals. The leaves, shoots, tender stems and grains are eaten as pot herb in sauces or soups, cooked with other vegetables, with a main dish or by itself. Traditionally, the boiled leaves and roots are used as: laxative, diuretic, anti-diabetic, antipyretic, anti-snake venom, antileprotic, anti-gonorreal, expectorant, to relieve breathing in acute bronchitis. It also has anti-inflammatory properties, immuno-modulatory activity, anti-androgenic activity and anthelmintic properties. Both leaves and seeds contain protein of an unusually high quality. The grain is milled for flour or popped like popcorn. The leaves of both the grain and vegetable types may be eaten raw or cooked. The leaves of this plant, known as Massaagu in Dhivehi, have been used in the diet of the Maldives for centuries in dishes such as mas huni.

**Amaranthus Viridis**

**Scientific Classification / Taxonomy**

- **Domain:** Eukaryota
- **Kingdom:** Plantae
- **Subkingdom:** Viridae Plantae
- **Phylum:** Tracheophyta
- **Subphylum:** Euphyllophytina
- **Infra phylum:** Radiatopses
- **Class:** Magnoliopsida
- **Subclass:** Caryophyllidae
- **Superorder:** Caryophyllanae
- **Order:** Caryophyllales
- **Suborder:** Chenopodiineae
- **Family:** Amaranthaceae
- **Subfamily:** Amaranthoideae
- **Tribe:** Amarantheae
- **Genus:** Amaranthus
- **Specific epithet:** viridis - L.
- **Botanical name:** Amaranthus viridis

**Vernacular Names**

- Hindi: Chaauriya

**ABSTRACT**

In the past 20 years, very little progress has been achieved in reducing food insecurity, child malnutrition and hunger in Africa. Under-nutrition and micronutrients deficiencies are widespread and affect mainly women and children. To address these problems, increased consumption of African leafy vegetables is promoted as sources of both micronutrients and bio-active compounds. Widely promoted African leafy vegetables include Amaranthus sp. Species of this genus are used as pseudo-cereals in Europe and America, and are mostly planted as vegetables in Africa. Amaranthus has been rediscovered as a promising food crop mainly due to its resistance to heat, drought, diseases and pests, and the high nutritional value of both seeds and leaves. Leaves are rich in proteins and micronutrients such as iron, calcium, zinc, vitamin C and vitamin A. All parts of the plant are used as medicine to heal many diseases in African communities. Tanduliyaka (A. viridis) is grown and utilized in many areas of the world as both a wild and cultivated pot herb. The plant is rich in calcium and iron and is a good source of vitamins B and C. Due to its small seed size and use as a pot herb, A. viridis is moved, both on purpose and unwittingly, throughout the world. The seeds can survive in the digestive tract of chickens. It is good cattle fodder, and is used medicinally and for making soap, but is poisonous to pigs.

**KEYWORDS:** Tanduliyaka, Amaranthus viridis, nutritional value, green leafy vegetable.
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

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Amaranthus viridis is used as a medicinal herb in traditional Ayurvedic medicine, under the Sanskrit name Tanduliyaka.

Pharmacological Activity

Narang Chungsamarnyart et al., studied the antiviral activity against the Foot and Mouth Disease virus (FMDV) type O, local strain KPS/005/2545 of forty-seven ethanol crude-extracts of 42 plants. The leaves and stem extracts of (Tanduliyaka) Amaranthus viridis were used. The concentration 0.024μg/μl of (Tanduliyaka) Amaranthus viridis L. leaves and stems inhibited the FMDV concentration 1X102.44 TCID50. It has antiviral proteins against tobacco mosaic virus.

Navjot Kaur et al., has purified lectin from the seeds of (Tanduliyaka) Amaranthus viridis Linn Anti-Proliferative Effect. Amaranthus lectin was found inhibitory to HB-98 cells and partially to PD-38BD1 cell lines.

Kwon S.Y et al., has purified an antiviral protein from the leaves of (Tanduliyaka) Amaranthus viridis was named amaranthin.

Jana Kalinova et al., studies were conducted to confirm the presence of rutin, one of the most common quercetin glycosides, and other quercetin derivatives in plants of genus Amaranthus.

Liu D et al., studied the effects of different concentrations (10(-6)M, 10(-5)M and 10(-4)M) of K2Cr2O7Cr(VI) on some minerals (Mn, Fe, Cu and Zn), lipid peroxidation, activities of antioxidant enzymes, photosynthetic function, and chlorophyll fluorescence characteristics were investigated in hydroponically grown (Tanduliyaka) Amaranthus viridis L. Results indicated that chromium was accumulated primarily in roots.

Kwon S.Y et al., acDNA library was constructed in Uni-ZAP XL vector with poly(A) RNA purified from leaves of (Tanduliyaka) Amaranthus viridis.

Zain-ul-Abedin M et al., were able to develop cultures from the cut-end parts of this plant tissue. The commonly used media were modified to achieve good and fast growth. Results have been obtained on the techniques, histology, chromosomal, and biochemical studies which indicate that the plant could be useful as a research tool to study problems in crop improvement at the cellular level.

Simone Mendonca et al., studied amaranth’s protein cholesterol-lowering effect and investigates its mechanisms hypercholesterolemia was induced in male hamsters through diet rich in casein (300 g/kg diet) containing regular levels of cholesterol (0.5 kg/g) fed during 3 weeks. They suggested that amaranth protein has a metabolic effect on endogenous cholesterol metabolism.

B.S.Ashok Kumar et al., showed the Invitro anthelmintic property of methanol extract of (Tanduliyaka) Amaranthus viridis Linn,115 Antinociceptive and antipyretic Activities116 and estimation of Bioflavonoids in (Tanduliyaka) Amaranthus viridis Linn By HPLC.

A. viridis (Tanduliyaka) is grown and utilized in many areas of the world as both a wild and cultivated pot herb (Uphof, 1968). The plant is rich in calcium and iron and is a good source of vitamins B and C (Morton, 1981).

REFERENCES


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