

## Quality evaluation of organic amaranth

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Received: 11.09.2012; Revised: 28.10.2012; Accepted: 29.11.2012

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■ **ABSTRACT** : This study envisaged a comparison between organic and inorganic amaranth. Parameters like physical characteristics, nutrient comparison, anti-nutrient profile, shelf-life, sensory quality and pesticide residues were analysed. Fresh weight was seen to be higher for organic amaranth (85.48 g). Appearance scores showed higher values for organically cultivated amaranth and the difference in values were significant. Highest moisture content was observed in organically cultivated amaranth. Vitamin C levels were found to be at par. Calcium levels were seen to be higher in organically cultivated amaranth (261.6 mg). Phenol content of organic amaranth was found to be lower than inorganically cultivated ones. Pesticide residue analysis gave negative results.

■ **KEY WORDS** : Organically cultivated amaranth, Sensory evaluation, Nutrient composition, Pesticide residue

■ **HOW TO CITE THIS PAPER** : Papachan, Agey and Divakar, Suma (2012). Quality evaluation of organic amaranth. *Asian J. Home Sci.*, 7 (2): 482-486.

Organic farming is today's answer not only for higher and sustained productivity, but also for safe and nutritious food. Organic food is increasingly demanded by the enlightened consumers all round the world. Organically grown agricultural product fetches a higher premium in the market. A scientific backing for the superior quality of organically cultivated produce would be more convincing to the consumers at large.

Vegetables are the integral part of a balanced diet and are considered inevitable, as their consumption prevents many diseases. Role of vegetables as a source of anti oxidants in prevention of new generation disease and delaying aging is well recognized.

Out of the common leafy vegetables, amaranth is the most popular vegetable consumed by most people all over India (Akbugro *et al.*, 2007). It is a high yielding nutritious tropical leafy vegetable. It is the only commercially grown leafy vegetable in Kerala. It is cultivated in an area of 1035 ha in this state. This crop has been an attractive option for farmers because of its very short duration high productivity, drought tolerance and relatively low incidence of pests and disease. Amaranth is often referred to as the poor man's spinach as it is a rich source of proteins, vitamins and

minerals.

Limited number of studies have systematically compared the quality of organically and conventionally produced vegetables, in this state. Hence, a study was taken up, to compare the quality of this popular leafy vegetable.

### ■ RESEARCH METHODS

This study was aimed to compare the quality characteristics of amaranth (variety-Arun) cultivated using organic and conventional methods.

#### Selection of locale :

Samples for the experiment were collected from the organic bazaar being operated by an NGO in the heart of the city. This is the only organic market prevalent in Thiruvananthapuram district. This organic market is issuing the 'PGS' certification for the organic practices prescribed by the NGO.

The conventional samples were collected from local farmers of Kalliyoor panchayath.

#### Selection of treatments:

Three types of farming practices were identified as the