THE ASIAN JOURNAL OF HORTICULTURE
Volume 7 | Issue 2 | December, 2012 | 442-444

Research Paper

Article history :
Received : 29.06.2012
Revised : 11.10.2012
Accepted : 11.11.2012

Evaluation of biochemical attributes in water chestnut (*Trapa natans* var. *bispinosa* Roxb.) collected from Lucknow region

MUKESH BABU AND DEEPA H. DWIVEDI[1]

Members of the Research Forum

Associated Authors:
[1]Department of Applied Plant Science, Babasaheb Bhimrao Ambedkar University, LUCKNOW (U.P.) INDIA

Author for correspondence :
MUKESH BABU
Department of Applied Plant Science, Babasaheb Bhimrao Ambedkar University, LUCKNOW (U.P.) INDIA

ABSTRACT : Water chestnut is an aquatic annual herb and its fresh valuable fruit crops. The huge variation in quality of water chestnut not well documented. In the present study, the biochemical property of water chestnut cultivars collected from different sites was comparatively evaluated.The results showed significant variation in TSS, pH,reducing sugar (%), non- reducing sugar (%), total sugar (%), acidity (%), and sugar/acid ratio among the various cultivars collected from the different areas.The maximum acidity (0.10%), vitamin-C (9.46 mg/100g),reducing sugars (2.06 %),non-reducing sugars (2.73%),total sugars (4.80 %),sugar/acid ratio (48.00) was recorded in T_1, while the maximum pH (5.83) and vitamin A was recorded in T_5. However, the maximum TSS (7.16^{0}Brix) was found in T_4.

KEY WORDS : Biochemical attribute, Water chestnut, Acquatic annual herb

HOW TO CITE THIS ARTICLE : Babu, Mukesh and Dwivedi, Deepa H. (2012). Evaluation of biochemical attributes in water chestnut (*Trapa natans* var. *bispinosa* Roxb.) collected from Lucknow region, *Asian J. Hort.*, **7**(2) : 442-444.

Water chestnut (*Trapa natans* var.*bispinosa*Roxb.) is a common aquatic herb popularly known as *Singharaor Paniphal* all over in India. It belongs to the family Trapaceae, one of the free-floating plants distributed in various part of the world. It has been commercially cultivated for the edible fruits in water bodies of low flat lands or lakes in India, China and Italy(Mazumdar, 1985; Takano and Kadono, 2005; Rodrigues *et al*., 1964; Murthy *et al*., 1962).In many countries in the torrid and temperate zone, people eat the fruit of the native stock as a grain food. The fruit is used as substitute for the cereals in the Indian subcontinent. Production of water chestnut should help resolve global food problems to some extent and would help to utilize the increasing water levels due to global warming, at least partly. In India, water chestnut is distributed all over the country and locally introduced into paddy field as alternative crops.In wake of growing demand of the consumers for natural foods having good therapeutic values, water chestnut offers excellent opportunity. The high consumption values of the fresh fruit are probably linked to the high nutritional and organoleptic value, and also to the increasing interest of the consumers towards organic products.Majumdar and Jana (1977) studied physicochemical analyses of water chestnut fruit to provide fundamental data biochemical studies of water chestnut. The objectives of the present study were to investigate biochemical analyses of the fruit to provide base for product development and eating quality of water chestnut.

RESEARCH METHODS

The study was carried out at the Department of applied plant science (Horticulture), Babasaheb Bhimrao Ambedkar (A Central University) University, Lucknow during 2010-11. The fruits used for experimentation were pruned from different sites of Lucknow region during peak season (November - December). Since there are no recognized varieties they were named of the name of place from where procured asT_1 (Mohanlalganj), T_2(Gosainganj), T_3 (Chinhat), T_4 (Bakshi kaTalab) and T_5 (Sarojni Nagar).The data on biochemical characters were recorded in during the year 2010-11 of value has been presented. Fully matured fruits were collected from different places of Lucknow region and kept as such in ambient condition. The kernel of nine fruits of each site replicated three