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# NUTRIENT ANALYSIS FOR THE DEVELOPMENT OF VALUE ADDED EDIBLE PRODUCTS FROM SHOOTS OF REED BAMBOOS, *OCHLANDRA WIGHTII* AND *O. TRAVANCORICA*

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**ABSTRACT: Bamboo has great importance in improving the life of people, especially rural people of the developing world with its renewable, productive, low cost and environment enhancing properties. The emerging new shoot of various bamboos is used as food in most of the North-eastern states of India and in countries like China, Japan, Thailand etc. The young shoots are seen emerging after the rain during the monsoon season. The young shoots are harvested at the earliest to avoid bitter taste and tougher shoots. The nutritional analysis of the emerging juvenile shoots of 3-5 days, of both *O. wightii* and *O. travancorica* are found to be rich in nutrients like carbohydrate, protein, starch, vitamin C, dietary fibre and minerals such as phosphorus, calcium, magnesium, sulphur, iron, manganese, copper and boron. These reeds are also characterized by having low fat. In view of the present findings, the freshly harvested shoots, is nutritionally richer and are better for health. The shoots contain cyanogenic glycosides and the higher amount of cyanide content was found in the apex portion. The amount of cyanogenic glycosides is lesser in case of both these reed bamboos as compared to other bamboo species. Hence these shoots can be recommended in cooked or fermented form as low cyanogenic glycoside content is safe for consumption and can be encouraged to supplement the increasing demands of food all over the world. As the shell life of these shoots are very low, they can be used as dry, canned or made to different value added products.**

**Keywords:** *Cyanogenic glycosides, nutrition, nutrients, reed bamboos.*

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## INTRODUCTION

Bamboo shoots have a wide range of uses. The emerging bamboo shoots are used as food in North-eastern states of India. They are used fresh, dried and in the form of pickles. There have been several nutrient studies of bamboo shoots (Sharma *et al*., 2004; Bhatt *et al*., 2005; Cheng, 2006; Nirmala *et al.,* 2007; Yang *et al.,* 2008; Park and Jhon, 2009). Bamboo shoots act against various diseases and are healthier for the body. Lobovikov *et al*. (2007) has reported that fresh shoots of bamboos are healthy and tasty. The use of bamboo shoots as vegetable in most of the Asian countries is increasing due to the presence of several nutrient compounds (Nirmala *et al*., 2009). Hoikhokim *et al*. (2016) has studied about fourteen bamboo species with edible shoots from Manipur. Zhang and Liu, 2001, have reported that the juvenile shoots are rich in vitamins.

However, the presence of anti-nutrient factors, the cyanogenic glycosides in the shoots of bamboo were also reported (Vetter, 2000; Hunter and Yang, 2002; Ke-jun *et al*., 2005 and Pandey and Ojha, 2013). The cyanogenic glycosides present in the shoots are removed by drying, cutting, boiling, soaking, fermentation etc. and are available for consumption as a harmless food product. Sarangtham and Hoikhokim (2010) reported that fermentation has been used in north eastern regions for preserving the bamboo shoots as well as for removing the toxicity of the bamboo shoots for a long time.