



Use of Young Red-Coloured *Mangifera indica* L. Leaves for Blood Glucose Control in Diabetes

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Mangifera indica L. belongs to the Anacardiaceae family and is extensively cultivated in Bangladesh because of its sweet edible fruits. In English, the fruit is known as 'mango' and in Bengali known as 'aam'. Mangoes come in diverse varieties, shapes, sizes, flavors, and extent of sweetness. Mango trees are quite large trees and can grow more than 20 feet in height. Various parts of the tree are considered to have medicinal qualities and are used by traditional or folk medicinal practitioners (FMPs) in Bangladesh. During spring, the trees sprout new leaves, which are red in color initially but rapidly turns to dark green. The Soren clan of the Santal tribe in Rajshahi district, Bangladesh, uses the inner part of the seeds for treatment of lesions on the tongue (Rahmatullah et al., 2012). Mature leaves are used for a toothache, tooth infections, and dysentery by FMPs in Narayanganj district, Bangladesh (Karim et al., 2011). Leaves and stems are used for dysentery treatment in Tangail district, Bangladesh (Rahmatullah et al., 2011). Bark and floral clusters are used for the treatment of dysentery and passing of blood with urine by FMPs in Kurigram district, Bangladesh (Das et al., 2012). Seeds are used for the treatment of diabetes in Khulna district, Bangladesh (Afrin et al., 2015). In this note, we describe a previously unreported use of new (red-colored) leaves of the tree for controlling blood glucose during diabetes. The information was obtained from an FMP in Tangail district, Mr. Md. Yusuf Ali, age around 35 years. In his method, young red leaves were first soaked in water for 12-14 hours and then boiled in water. The water was filtered, cooled and taken orally each day in the morning for 7 days on an empty stomach. Alternately, young red leaves were dried and powdered. Two teaspoons were taken orally with water every morning. The second procedure was mostly followed at other times of the year following spring. Since new leaves appeared mostly during springtime, they were collected, dried, and powdered during spring, and the powder used at other times of the year. Although *Mangifera indica* (Figure 1) is a very common plant, the plant was further identified at the Bangladesh National Herbarium and Accession Number obtained (45382). The voucher specimen was deposited at the Herbarium. According to the FMP, treatment for 7 consecutive days was enough to bring elevated blood glucose levels to normal levels in diabetic patients. The FMP did not claim that the procedure would cure diabetes; the claim was that it would bring down elevated



blood glucose levels. Interestingly, mango leaves have been reported to contain a hypoglycaemic agent known as mangiferin (Peter et al., 2017).

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Keywords: *Mangifera indica*; Diabetes; Bangladesh

DECLARATION OF CONFLICT OF INTEREST

No conflict of interest associated with this work.

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Figure 1. *Mangifera indica* with young red-coloured leaves.