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# Nutritional potential of tamarind (*Tamarindus indica* L.) from semi-arid and subhumid zones of Uganda

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## Abstract

It has been reported that plants that experience some form of stress while growing tend to accumulate increased levels of nutrients that are useful to humans. We compare the proximate and mineral composition of *Tamarindus indica* leaves, fruit pulp and seeds from Uganda's semi-arid and sub-humid zones with contrasting environmental conditions including temperature, rainfall, soils and geology. Samples were analyzed following standard AOAC procedures. Mineral content was in the order  $K > Ca > Mg > Na > Fe$  and  $K > Mg > Ca > Na > Fe$  for the semi-arid and subhumid zones respectively. *Tamarindus indica* fruit pulp and leaves from both zones plus seeds from the semi-arid zone contained the Na/K ratio of  $< 1$  recommended by World Health Organisation for prevention and treatment of cardiovascular diseases. Proximate composition for leaves, fruit pulp and whole seeds were in the following ranges: Moisture content (9.83–69.42%), ash (1.93–11.6%), carbohydrate (64.74–88.7%), crude lipid (0.96–3.57%), crude fiber (0.89–14.93%), and crude protein (4.59–14.82%). Leaves contained higher levels of crude protein, crude lipid and crude fibre than fruit pulp. *Tamarindus indica* from the semi-arid zone tends to accumulate nutrients in ways that better promote human health. *Tamarindus indica* from both zones has high potential to provide functional foods and livestock feeds.

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