

**DEVELOPMENT OF NON-DAIRY MILK USING
COWPEA (*Vigna unguiculata*) AND SESAME (*Sesamum
indicum*) TREATED WITH DIFFERENT PROCESSING
METHODS**

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by

**KURUPPU MUDIYANSELAGE DULANJALEE ANURADHA
SENEVIRATHNE**

**Department of Animal Science
Faculty of Animal Science and Export Agriculture
Uva Wellassa University**

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ABSTRACT

Non-dairy milk is a fast-growing food category among the consumers who are looking for nutritious vegan products as a solution for lactose intolerance and allergic to the milk proteins. Plant-based milk alternatives are a rising trend, which can serve as an inexpensive alternate to poor economic group of developing countries and in places, where cow's milk supply is insufficient. They are designed to have a similar look, feel, taste, and shelf life as cow's milk so that they can be used in similar applications. The present study was carried out to identify the best processing method and to develop a non-dairy milk using cowpea (*Vigna unguiculata*) and sesame, (*Sesamum indicum*) blends. Three processing methods as dry, roasting, germination used to prepare the non-dairy milk treatments with cowpea and sesame blends. Among three processing methods, roasting method was selected as the best processing method based on sensory scores. A ratio of 7:3 was identified as the best combination ratio of the cowpea and sesame to extract milk. Further, reduction of the leguminous flavor was done using a base treatment. The prepared cowpea and sesame incorporated milk was analyzed for sensory, proximate and physicochemical properties. Fresh milk was served as the reference sample. Moisture, crude protein, fat and ash content of the selected plant milk product was 92.06%, 1.25%, 2.63%, 0.68% respectively. The pH value of the plant milk sample was measured at 1st, 2nd, 4th, 6th, 7th, 11th, 13th, 14th and 21st days and varied between 7.13-7.10. Physicochemical properties of the developed plant milk were less than the values in fresh milk. In conclusion, a significant difference ($p < 0.05$) was observed in cowpea and sesame blend than that of fresh milk in terms of organoleptic properties.

Key words: non-dairy, roasting, plant milk, pH, vegan