

# NUTRITION & HEALTH

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## Evaluation of cookies from trifoliate yam flour and soy flour blends

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**Statement of the Problem:** The hike in price of wheat flour and its resultant effect on the economy of Nigeria has necessitated the acceptance of composite or alternative flours for bread, pastry and pasta. Trifoliate yam (*Dioscorea dumetorum*) an underutilized yam specie has been explored for processing into flour in order to increase the consumption of this highly nutritious yam specie which has been limited in use due to the hardening it experiences after harvesting. The nutritional composition of the baked products (like cookies) needs to be well considered especially when the target markets are children because of the high rate of malnutrition recorded among children in a country like Nigeria.

**Materials & Methods:** Trifoliate yam was used to produce flour, enriched with soybean (*Glycine max*) flour at three different substitution levels (10%, 20% and 30%) and processed into cookies. The cookies were analyzed for proximate composition, nutritional composition and sensory evaluation to determine its acceptability while the flour was analyzed for physico-chemical, functional and pasting properties.

**Results:** It showed that enrichment of trifoliate yam flour with soybean flour increased the protein content from 7.55% at 10% level of substitution to 12.82% at 30% level of substitution. There was also an increase in the fat content with increase in the substitution level. The overall acceptability showed that 20% substitution level had the highest score and there was no significant difference in the cookies made from the enriched flour at the different levels of substitution ( $p < 0.05$ ).

**Conclusion & Significance:** Enrichment of trifoliate yam flour with soy flour at levels of 10% to 30% resulted in a notable increase in the protein content, which is nutritionally advantageous where many cannot afford high proteinous foods because of its cost.

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