

COMMUNICATION N°7

Production and appreciation of gari enriched with Yam bean (*Pachyrhizus* spp.) by processors in south and central Benin. (2013). In: Okechukwu R.U., Manu-Aduening J.A., Ntawuruhunga P., Dziedzoave N.T., Adu-Kwarteng E., Nerlinger Darko M. (Editors), *Book of Abstracts and Programme of the 12th Triennial Symposium International Society for Tropical Root Crops – Africa Branch. Theme: Competitiveness of Root Crops for Accelerating Africa's Economic Growth. Accra, Ghana, 30th September – 5th October 2013*, p. 106. Houssou P., **Padonou S.W.**, Adégbola P.Y., Ahounou J.L., Olou D., Djivoh, H.Y.A., Fandohan P., Mensah G.A.

12th Triennial Symposium

International Society for Tropical Root
Crops-Africa Branch

Book of Abstracts & Programme

Theme

"Competitiveness of Root Crops for Accelerating Africa's
Economic Growth"

Sub-Themes

- African Root Crops Trade & Market Scenario
- Policies favourable to competitiveness of Root Crops in Africa
- African Scenario on Production and Utilization of Root and Tuber Crops
- Business and Investment Scenario on competitiveness of Root Crops in Africa benchmarking Latin America, Asian & European Markets (Learning from Latin America, Asian & European industries)
- Mobilizing Investors for Sustainable Root & Tuber Crop Research and Development

Editors: B. U. Osochakwa, J. A. Mwanjilana, P. Ntshunzanga, N. T. Dialewang,
E. Adu-Gyamang and Michael Heritage Dube



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Production and appreciation of gari enriched with Yam bean (*Pachyrhizus*-spp) by processors in South and Central Benin

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Abstract

The objective of the study was to test with the processors the use of yam bean associated with cassava to produce enriched gari. Seven women's groups, producing gari were selected in five different regions in the south and center of Benin. Mixtures of 25% yam bean + 75% cassava and 50% yam bean + 50% cassava were used. Gari from 100% cassava served as a control. Different gari obtained were analyzed and their organoleptic quality was appreciated evaluated by the processors. Results obtained show that the production of enriched gari was more difficult for the processors. The processing duration (10 hrs 54 min) used to process 100 kg of cassava into gari was less than that was used to process 100 kg of the mixture (25% yam bean + 75% cassava and 50% yam bean + 50% cassava) that were 12 hrs 27 min and 14 hrs 13min respectively. The processing yield obtained for gari 100% cassava is significantly ($P < 0.05$) higher (23.15%) that those recorded for Gari enriched with 50% of yam bean (14.34%) and for gari enriched with 25% yam bean (20.95%). The organoleptic evaluation revealed that, with reference to gari 100% cassava, women processors prefer gari enriched with 25% of yam bean than the gari enriched with 50% of yam bean. The protein content detected for gari enriched 50% of yam bean was higher (1.54% bs) than gari from 100% cassava and gari enriched with 25% of yam bean of which protein content were quite similar (about 1.12 % bs).

Keywords: Yam bean, cassava, processing yield, preference protein.

COMMUNICATION N°8

The use of the low dry matter yam bean *Pachyrhizus erosus* storage roots in drinks processing in Benin. (2013). In: Okechukwu R.U., Manu-Aduening J.A., Ntawuruhunga P., Dzedzoave N.T., Adu-Kwarteng E., Nerlinger Darko M. (Editors), *Book of Abstracts and Programme of the 12th Triennial Symposium International Society for Tropical Root Crops – Africa Branch. Theme: Competitiveness of Root Crops for Accelerating Africa's Economic Growth. Accra, Ghana, 30th September – 5th October 2013, p. 108.* **Padonou S.W.**, Ahounou J.L., Adégbola P.Y., Hounyèvou-Klotoé A., Adjanohoun A., Aïhou K., Fandohan P., Mensah G.A.

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The use of the low dry matter yam bean *Pachyrhizus erosus* storage roots in drinks processing in Benin

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Abstract

Effluent expelled as waste from fresh yam bean (*Pachyrhizus erosus*) storage roots during processing was used to prepare soft and hard drinks. The storage roots were harvested at six months maturity from the experimental fields of the Agricultural Research Centers of Niaouli and Savè. The processing consisted in peeling, grating and pressing the storage roots to obtain the effluent which was bottled and pasteurized. Sugars in the effluent were identified and quantified using a High Performance Liquid Chromatograph (HPLC). It appeared that yam bean's effluent contained 12.32 mg/ml of sucrose, 21.01 mg/ml of glucose and 14.08 mg/ml of fructose. The table juices processed from the effluent had a good sanitary quality till twelve months storage time as shown by microbiological analyses, and were positively appreciated by panellists. Moreover, analysis showed that the alcoholic drinks obtained following the distillation of the effluent fermented by the yeast *Saccharomyces cerevisiae* contained ethanol. The study demonstrated the usefulness of this waste which allowed to obtain sweet table juice positively appreciated by panellits and a good quality alcoholic liquor.

Keywords: Legume-root crop, soft drinks, hard drinks, HPLC, Benin.