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Diversification of Sweet Potato Blends and Utilization for Malnutrition and Poverty Alleviation

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Abstract : Value addition to agricultural produce is of possible potential in reducing poverty, improving food security and malnutrition, therefore the need to develop small and micro-enterprises of sweet potato production. The study was carried out in Nigeria to determine the acceptability of blends sweet potato (Ipomea batatas) and commodities yellow maize (Zea mays), millet (Pennisetum glaucum), soybean (Glycine max), bambara groundnut (Vigna subterranean), guinea corn (Sorghum vulgare), wheat (Triticum aestivum), and roselle (Hibiscus sabdariffa) through sensory evaluation. Sweet potato (Ipomea batatas) roots were processed using two methods. The first method involved the use of a fabricated gas powered cabinet dryer to dry sulphited chips and the second method was the use of traditional sun drying method without the addition of the chemical. The blends were also assessed in terms of functional, chemical and color properties. Most acceptable blends include BAW (80:20 of sweet potato/wheat), BBC (80:20 of sweet potato/guinea corn), AAB (60:40 of sweet potato/guinea corn), YTE (100% soybean), TYG (100% sweet potato), KTN (100% wheat flour), XGP (80:20 of sweet potato/soybean), XAX (60:40 of sweet potato/wheat), LSS (100% Roselle), CHK (100% Guinea corn), and ABC (60:40% of sweet potato/ yellow maize). In addition, chemical analysis carried out revealed that sweet potato has high percentage of vitamins A and C, potassium (K), manganese (Mn), calcium (Ca), magnesium (Mg) and iron (Fe) and fibre content. There is also an increase of vitamin A and Iron in the blended products.

Keywords : blends, diversification, sensory evaluation, sweet potato, utilization
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