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Research Article

TECHNICAL SHEET OF *BEILSCHMIEDIA MANNII (LAURACEAE)* SEED PREPARATION IN IVORY COAST

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ABSTRACT

The Seed of *Beilschmiedia mannii* (Lauraceae) is a traditional vegetable, non-timber forest product (NTFP) much consumed by some populations of the forest regions in Ivory Coast. It is rich in essential nutrients (carbohydrates, protein, fat) and minerals (Ca, K, Mg, Fe) which are important nutritional supplements to the diet often starchy (Plantain Foutou, yam Foutou, cassava Foutou, Placali, etc.) of these populations. The aim of this study is to contribute to the promotion of foodstuff non wood forest products with this simple traditional method of preparing this little-known vegetable rich in protein (5.9 % - 7.16 % d. m).

Keywords: *Beilschmiedia mannii*, Seed, traditional vegetable, non-timber forest product, nutritional supplements.

INTRODUCTION

Beilschmiedia mannii, a tree in the lowland rainforest, sometimes in marshy situations, often on river banks, usually an under storey tree about 10 m high by 60 cm girth (Figure 1), but attaining 25 m by 3 m in Ghana and 35 m by over 3 m in Liberia (Figure 2)[1]. *Beilschmiedia mannii* (Lauraceae) is a shrubby evergreen tree with rather big reaching size 35 m of top[2]. The genus *Beilschmiedia* comprises about 250 species widely distributed in the inter-tropical region among which approximately 80 in tropical Africa. It is classified in the genre *Beilschmiedia*[3]. In Ivory Coast the fruit, of the tree *Beilschmiedia mannii*, is collected in forest from October until December. The fruit (Figure 3)[4] of the tree is consumed naturally and in the ingredient of the sauce. The seed is a popular food usually sold on the markets of West Africa; it is roasted and crushed to be consumed before, and to add as condiment and complement in soups, rice and vegetables. It supplies edible oil[2]. The aim of our study is to present a simple way to traditionally consume the fruit seed of the tree *Beilschmiedia mannii* by some populations of Ivory Coast.

MATERIAL AND METHODS

Material

Figure1: *Beilschmiedia mannii* tree [1]

Figure 2: *Beilschmiedia mannii* tree[1, 2]

Figure 3: *Beilschmiedia mannii fruit* [4]

Vegetables *Beilschmiedia Mannii* seed, dried mushroom *Volvariella* and others condiments (dry meat, dry fish, pepper, onion, vegetable oil, salt, etc.) used for preparing *Beilschmiedia Mannii* seed sauce are purchased on the Abidjan market in Ivory Coast.

In a saucepan placed on fire, put water, oil, a pinch of salt, pepper, vegetables, mushrooms Volvariella volvaceae previously trimmed and soaked in water and then, if necessary, add the smoked meat or dried fish. Let the sauce cook then add some seasoning ingredients and diced onion. Then remove the peppers of the broth, crush them and pour into it the paste obtained. Remove the cooked meat or fish of the broth with a little sauce and add the flour of seeds *Beilschmiedia mannii* in the remaining broth; stir up the whole before adding the meat or fish in the mixture. After a few minutes of cooking the sauce seed *Beilschmiedia mannii* is ready to be consumed. It is a viscous sauce that is eaten with traditional dishes: plantain Foutou, yam Foutou, cassava Foutou, rice, Placali.

Seed *Beilschmiedia mannii*

↓

Trimming

↓

Washing

↓

Drying

↓

Grinding

↓

Beilschmiedia mannii
Seed flour

Mushroom *Volvariella volvaceae*

↓

Trimming

↓

Washing

↓← **Broth (i e dry meat or fish)**

Precooking

Beilschmiedia → ↓ ← **Condiment**
***Mannii* Seed flour**

Cooking

↓

Sauce of *Beilschmiedia mannii* Seed

Figure 4: *Beilschmiedia mannii* Preparation

Figure 5: *Beilschmiedia mannii* Seed,

Figure 6: *Beilschmiedia mannii* flour,

Figure7: *Beilschmiedia mannii* Sauce

RESULTS AND DISCUSSION

The traditional *Beilschmiedia mannii* Seed sauce is usually prepared by the method described above (Figure 4). It has a thick and viscous greater or lesser degree depending on whether the amount of *Beilschmiedia mannii* flour added to the broth mushroom *Volvariella volvaceae* is higher or lower consistency. The nutritional composition of this sauce analyzed in relation to the nutrient content of *Beilschmiedia mannii* seed contain a significant protein content of about 5, 9 % - 7, 16 % dry matter; fat 0, 50 - 2, 04 % d. m; carbohydrate 75, 8 - 92.080 % d. m; ashes 3.89 – 5.70 % d. m; Energy 379.610 Cal / 100 g d. m[5-7]. This sauce is also rich in minerals. Including: K 0.872 % d. m; CA 0.104 - 0.022 % d. m; Na 0.061 % d. m; Mg 0.071 % d. m; Fe 0.029 % d. m[6,7]. The seed of *Beilschmiedia mannii* is a traditional vegetable, non-timber forest products[8] much consumed by some populations of the forest regions in Ivory Coast. It has a remarkable nutritional composition providing vegetable protein[9] intake in the diet of people based starch (Foutou of plantain, Foutou of yam, Placali, Foutou of cassava, etc.).

CONCLUSION

Populations, who have difficulty to provide animal protein, would benefit to include in their diet vegetable proteins. In particular, non-timber forest food products (PFANL), such as seeds *Beilschmiedia mannii* (Lauraceae), rich in essential nutrients and mineral elements.

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