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CÔTE D'IVOIRE

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Future African Savannas

Local Knowledge of Biopesticide Plants in Groundnut Culture in Boundiali (North of Côte d'Ivoire)

Introduction and problem statement

- Groundnut (*Arachis hypogaea* Linné, 1753) is cultivated in tropical, subtropical and temperate regions for its oilseeds. It is grown primarily by peasants in developing countries (Schilling 2001, Maliki, *et al.* 2020b).
- The cultivation of groundnuts contributes to soil fertility, the diversification of cropping systems, and human and animal nutrition (Maliki *et al.,* 2020a).
- However, the production and conservation of this agricultural product is still faced with many biotic and abiotic constraints, especially pests (insects, rodents and weeds) (Anjarwalla *et al.,* 2016; Benmeddour and Fenni, 2018). To manage this situation, farmers continually use chemical pesticides dominated by synthetic herbicides and insecticides, with harmful consequences..
- The use of biopesticide plants could be an alternative to the uncontrolled use of chemical pesticides and could contribute to soil restoration (Mondedji *et al*., 2015).

Objectives

To assess indigenous knowledge of biopesticides used against pests in groundnut crop.

- Create an inventory of biopesticide plants used against pests in groundnut in three localities of Boundiali
- Analyze the mode of use of these biopesticides plants
- Determine the availability of these biopesticides plants through their rarefaction index

Methods

- Ethnobotanical survey
- Statistical analysis for ethnobotanical data
- Botanical survey
- Analysis of botanical data: rarity index of the species

$$Ri = \left(1 - \frac{ni}{N}\right) * 100$$ **(Géhu, 1980)**

Results

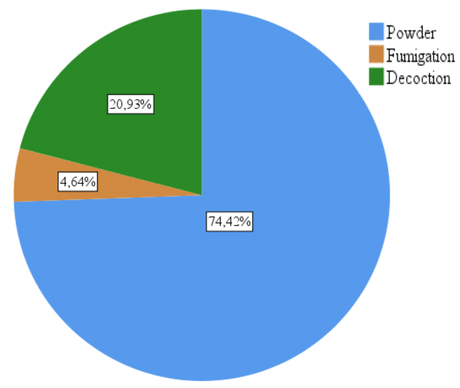
Knowledge of biopesticide plants of the populations surveyed

	Fréquence	Pourcentage
Yes	87	29,0
No	213	71,0
Total	300	100,0

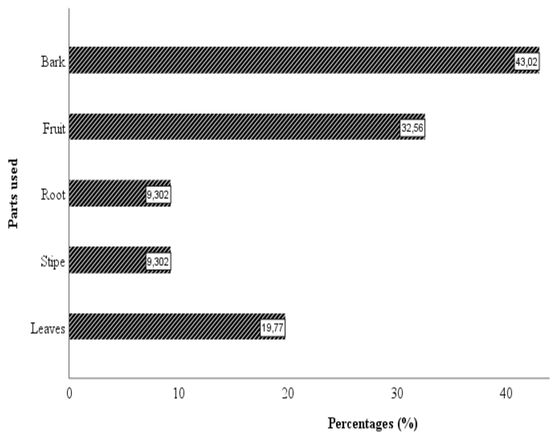
Gender of the populations surveyed

	Fréquence	Pourcentage
Man	136	45,3
Women	164	54,7
Total	300	100,0

Method of preparation used by the local population



Different parts of the biopesticides plants used



Rarity index and IUCN conservation status of biopesticides plants

Scientific name	Local name	Value Ri (%)	Statut IUCN
Isoberlinia doka Craib & Stapf	Tell djigué	100	LC
Vitex doniana Sweet	Djanhou	100	LC
Vitellaria paradoxa C. F. Gaertn.	Lodjigui Ché fara	66, 67	VU
	Dingueli	100	
Lannea microcarpa Engl. & K. Krause	Yéldjigui Djala fara	88,87	LC
Lawsonia inermis Linn.	Djébi yiri	88,87	LC
	Félem Félébé	77,78	
Opilia celtidifolia (Guill. & Perr.) Endl.	Gaglégui	77,78	LC
	Gougourouba	100	
Cola cordifolia (Cav.) R. Br	Kodjigui Kébi yiri	88,87	LC
Parkia biglobosa (Jacq.) Benth.	Nédjigui	77,78	LC
Cassia sieberiana DC.	Pôgôhne Sidjanfi	44, 45	LC
Kigelia africana (Lam.) Benth.	Sôpôlôsségui Sidjamba	77,78	LC
Ocimum gratissimum Linn.	Soukonan	88,87	LC
Cochlospermum planchonii Hook.f.	Trigba Touroubara	88,87	LC

Conclusion and recommendations

The study on the knowledge of biopesticide plants shows that certain plants can be useful in the fight against pests instead of chemicals. The study also showed that the majority of these plants are rare at best due to anthropogenic actions. We recommend evaluating the effectiveness of these biopesticide plants against pests.

Stakeholders: FAO, Agriculture Organisation, Nature resources Institute, Institute of health and NGOs

Partner institutions:

UNIVERSITY OF NAIROBI

zef Zentrum für Entwicklungsforschung Universität Bonn

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