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Opportunities and Hurdles Relating to Full Exploitation of Edible Caterpillars in Africa

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Abstract

Edible caterpillars form an important part of traditional diets in sub-Saharan-Africa. The caterpillars consumed mainly belong to families Saturniidae, Notodontidae, Noctuidae and Sphingidae. They are a rich source of proteins, vitamins, fats and minerals. Additionally, edible caterpillars provide a source of income for rural communities mainly in western (e.g. Nigeria), central (e.g. Congo) and southern (e.g. Zimbabwe) Africa. However, this resource is underexploited owing to several challenges. We seek to unpack the opportunities, challenges and possible channels to maximise the utilisation of edible caterpillars in Africa. Caterpillars consumed in Africa are mainly harvested from the wild, which is unsustainable, often seasonal, and raises major conservation concerns due to over-harvesting and habitat destruction. Harvesting from the wild, processing and packaging is mostly done by women which is tedious and time consuming. Production in captivity could be an effective way to curb this problem. We focus on rearing opportunities, possible challenges facing mass-rearing (for example entomopathogens, parasitoids, pupal and egg diapause and unsynchronised emergence of male/female moths) and potential channels to involve communities in their rearing. Poor storage, sanitation and handling also leads to bacteria and fungi contamination of the caterpillars raising food safety concerns. This calls for improved rearing, harvesting, processing, storage and handling methods to enhance the quality of the end product. Women and youths can be trained on more efficient methods of value addition and packaging of the product to fetch better prices. Finally, we discuss existing government policies supporting edible caterpillars and critical policy gaps for improvement.

Keywords: Edible caterpillars, edible insects, entomophagy, insect consumption, saturniidae