Situation of Edible Insects before Developing its Processing Technologies to Enhance Rural Nutrition in Madagascar

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Context
- In Madagascar, highlands are most affected by chronic malnutrition conducting to growth retardation: from 45 to 60% (ONN, 2019)
- 65 species of edible insects from seven orders recorded (RANDRIANANDRASANA & BARENAUM, 2015) in Madagascar
- decreasing quantity of collected wild resources season by season (Borocera madagascariensis, Coleoptera larvae and adults etc.) according to the ex-ante analysis of the ProciNut Project (2018).

Objectives
- Establish baseline database for the ProciNut project,
- Identify the willingness to rear insects in rural community which wild collect insects for human consumption for centuries
- Understand the acceptance of 5 insect species as livestock and their suitability of rearing at the study site in order to design adequate processing technologies

Materials and Methods
- Five villages of Sandrandahy, an integral part of the southern zone of the Central Highlands whose altitudes vary between 1,200 to 1,500 m. The climate of the region is a tropical
- Random survey of 128 household leaders from July to August 2019 (Fig. 1)

Results
- 96.1% of households eat at least 1 species of insect, men (84.5%) are more interested in insect farming compared to women (68.7%) (Fig. 3)
- 74.2% of farmers are willing to start insect rearing (Fig. 2)
- Potential species for rearing: silkworms (B. madagascariensis), local crickets (akitra or Gryllus madagascariensis, sakivy or Amblylakis nigrolimbata), local locusts (valala or Cyrtacanthacris tatarica) (Fig. 4).

Way forward
- Taxonomy identification and nutritional profile analysis of native species
- Selection of farmer leaders by gender and interest for household nutrition improvement
- on-farm experimentations using locally available resources
- national policy to be developed with the local stakeholders to promote the edible insect sector.