Buzzworthy: The role of entomophagy in agricultural development

Julie MacCartee
Insects are awesome

- 1 million described species
- Only ~5000 considered harmful

Art by Mari Pierce-Quinonez
Entomophagy

2 billion people  1900+ species

FIGURE 2.1
Recorded number of edible insect species, by country

Source: Centre for Geo Information, Wageningen University, based on data compiled by Jongema, 2012.

Source: Edible insects: Future prospects for food and feed security (FAO)
Harvesting / Semi-cultivation vs Rearing / Farming
Mopane Caterpillar

Photo: JBDonane (Flickr)

Photos: Greg Willis
Why should agriculture and rural development practitioners care about entomophagy?
PROTEIN
FATTY ACIDS
FIBER (CHITIN)
IRON
ZINC
SELENIUM
& more…
High feed conversion rates

FIGURE 5.1
Efficiencies of production of conventional meat and crickets

Source: Edible insects: Future prospects for food and feed security (FAO)
ENVIRONMENT

Low GHG and ammonia emissions

Minimal water & land use
Ability to be reared on organic side streams
Huge potential as animal feed

Photo: Oakley Originals (Flickr)
Livelihoods

• Household income
• Important for school fees and household items

• Lao village
  – 23% of $$
  – 21 diff. insects!
Livelihoods

• Markets are expanding
• Subsistence -> Commercial
• Low-tech, low-capital investment
UGANDA

Grasshoppers, Uganda’s Seasonal Snack, Bring Business Boom for Traders

Edna Namara, Reporter
- Recognize that entomophagy is happening
- Be careful not to harm insect-based livelihoods when implementing programs
Consider whether dietary surveys should track insect consumption

Support new innovations

Help expand the conversation