

Insects-based Food Products: New Value Chains & Consumer Groups

**Short course & Workshop on Insects and Food
and Feed**

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Outline

1. Traditional ways of preparing insects in Thailand & Laos
2. New insect products on national & international markets
3. New value chains & business opportunities
4. New consumer groups: acceptance of food

Thailand & Laos: Tradition of eating insects

- ▶ Thailand & Laos: long tradition of eating insects = part of culture
- ▶ Thailand: regionally dependent - mostly consumed in North/Northeast & Southern part - in Central region often by migrants from other regions
- ▶ Insects either consumed as snack or as main food (either own its own or as an ingredient into another dish)



Source: Veterinarians without Borders - Canada

Thailand & Laos: Traditional ways of preparation

- ▶ Crickets, grasshoppers etc: usually deep-fried as snack - sometimes added to soups
- ▶ Weaver ant brood: mixed with vegetables & meat, steamed in banana leaves, eaten with omelettes or soups, or as salad (Thai: yum-khai-mod-daeng)
- ▶ Hornet larvae: steamed
- ▶ Most dishes: whole insects
- ▶ Except of deep-fried insects as snack, most insect dishes are prepared at home



Source: Veterinarians without Borders - Canada



Source: Hanboonsong & Durst, 2014

Exception...Giant water bug chili paste

- ▶ Insects grinded & processed into paste
- ▶ Long-time commercial product in Thailand (& Laos)



New products on the market

Fried, seasoned & vacuum-packed insects snacks



Cricket flour & Pasta with cricket flour



Seasoned insects snacks



Crickets coated with chocolate



Protein bars with cricket flour



Cookies & chips with cricket flour



Scorpion candies



Ant candy



Laos: Cricket Chips & Chili Paste by Women Producer Group



ລຽບຈີ່ຫຼືດ



ຜະລິດຕະພັນຈີ່ຫຼືດທີ່ ແຊບ
ແລະ ເພື່ອສຸຂະພາບ

ກຸ່ມແມ່ບ້ານຫາດວຽງຄຳ
ເຂດຫ້ວຍຈຽມ, ເມືອງໄຊທານີ, ກຳແພງນະຄອນຫຼວງວຽງຈັນ

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ວັນສາຕະວັນ



ຜະລິດຕະພັນຈີ່ຫຼືດທີ່ ແຊບ
ແລະ ເພື່ອສຸຂະພາບ



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Product Promotion & Market Exploration

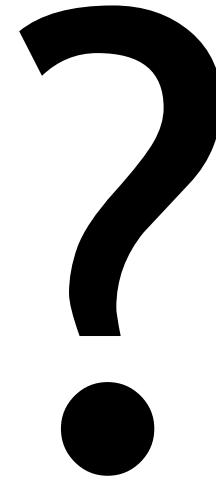
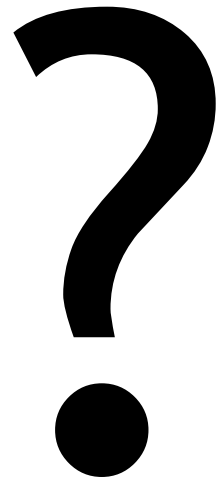
Cricket chips & chili paste at organic market, Vientiane



Cricket chili paste at fresh market, Vientiane



Instant noodles..fortified with insects



New value chains & business opportunities

▶ Creation of new value chains:

- ▶ Insect producers
- ▶ Intermediate Processors - e.g. cricket flour
- ▶ Final processor - e.g. producer of pasta, cookies, chips, protein bars
- ▶ Retailers - e.g. supermarkets, small shops, specialized shops for insect-based products

▶ New business opportunities for:

- ▶ Insect farmers (expanded demand for raw produce)
- ▶ Intermediate processors (expansion of current business/creation of new businesses)
- ▶ Final processors (expansion of current business/ creation of new businesses)
- ▶ Retailers (expansion of current business/creation of new business)

▶ Markets: national & international

New consumer groups

- ▶ Consumer acceptance of food depending on:
 - ▶ Cultural factors: insects part of culture or not
 - ▶ Individual experiences/awareness: experience in insect-eating; awareness of different species; knowledge about different ways of preparation
 - ▶ Interest in & motivations for eating insects: taste & familiarity vs. sustainable food consumption
 - ▶ Concerns & criteria of consideration: negative consequences/lack of experience of eating unknown species, lack of knowledge on production, safety, product appearance (non-visibility of insects)
- ▶ Non-eaters: prefer products where insects not visible (e.g. cookies)
- ▶ Eaters: used to whole insects - visibility only concern with unknown species
- ▶ Other factors: willingness/ability to pay & convenience



Thank you for your attention!
Any Questions?

The cricket farming project in Laos given reference to in this presentation was carried out by Veterinarians without Borders - Canada in cooperation with partners and with the aid of a grant from Global Affairs Canada.

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Literature:

Tan HSG et al. 2015. Insects as food: Exploring cultural exposure and individual experiences as determinants of acceptance. *Food Quality and Preference*, 42, pp. 78-89. <http://dx.doi.org/10.1016/j.foodqual.2015.01.013>