





Production and Processing of Edible Insects for Improved Nutrition

Marketing and Consumption of Edible Insects in the Urban Center of Yangon, Myanmar

Myint Thu Thu Aung ¹, Jochen Dürr ²

¹ PhD candidate, Center for Development Research (ZEF), University of Bonn, Germany ²Center for Development Research (ZEF), University of Bonn, Germany

Background

In Myanmar, insect-eating is a traditional habit in rural, food-scarce areas. Nowadays, insects have become popular also in big cities. Edible insects vary from region to region and include crickets, bamboo caterpillars, water beetles, honey bees, giant water bugs and big ants. Despite the fact that entomophagy is widespread in Myanmar, research on its market potential is scarce.

Objectives

Explore the potential and constraints of edible insect consumption in the urban center of Yangon.

Methods

A qualitative data collection technique through face-to-face in-depth interviews with vendors and consumers was used to investigate the current situation of people's interest in edible insects in Yangon. 500 consumers (51% female and 49 % male) and five retailers were interviewed at five market places in Yangon namely Mandalay Market, Yuzana Plaza, Insein Market, Chinatown and Night Market where edible insects are available.

Results

Crickets are the most popular edible insect in Yangon. They are collected from nearby Bago region, and from the more distant States of Karen, Mon and Shan. There are two cricket seasons when they are sold fresh or fried in downtown markets and also offered as a special snack in bars. In recent years, cricket prices have increased which hindered development of demand. 47% interviewees are considered consumers and 53% non-consumers (Diagram 1). In the consumer group, male dominate with 72% whereas only 28% are female. In contrast, in the non-consumer group, male only count for 28% and female for 72%. Of all women, only 26% are consumers of edible insects. Conversely, 70% of all interviewed men consume insects.



Photo 1: Street vendor of giant crickets in Yangon

Five types of consumers could be classified according to their reasons to buy edible insects:

Type 1 : Delicacy

Type 2 : Nutritional values

Type 3: Appetizers while drinking

Type 4: Natural seasonal food

Type 5: Healthy food

Seven types of non-consumers could be categorized due to following reasons:

Type 1: "Dirty" origin of insects

Type 2: Cultural and religious beliefs

Type 3: Afraid of appearance of insects

Type 4: Cause health problems

Type 5: Residuals of chemical insecticides

Type 6: Price too high

Type 7: Not fresh and unsanitary

Diagram 2 shows that Type 1 consumer is the most common one followed by Type 4 and Type 3. In all types, male consumers dominate. Type 7 is the most important nonconsumer category, followed by Type 6, 4 and 5 (Diagram 3). In almost all non-consumer types, female ratio is higher than male. Nonconsumer can be divided into two main groups: first, people who never tried edible insects and second, consumers who once ate insects in the past but now refrain from eating them because of one of the above mentioned reasons. The first group include Type 1, 2, and 3 while Type 4, 5, 6 and 7 form the second group.

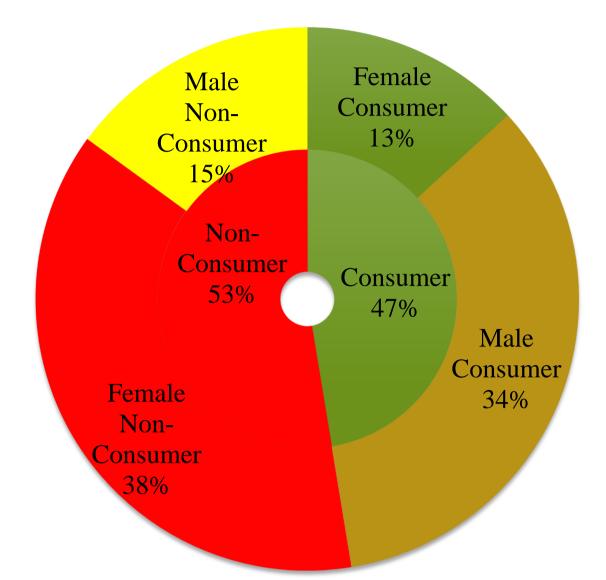


Diagram 1: Classification of consumers and non-consumers

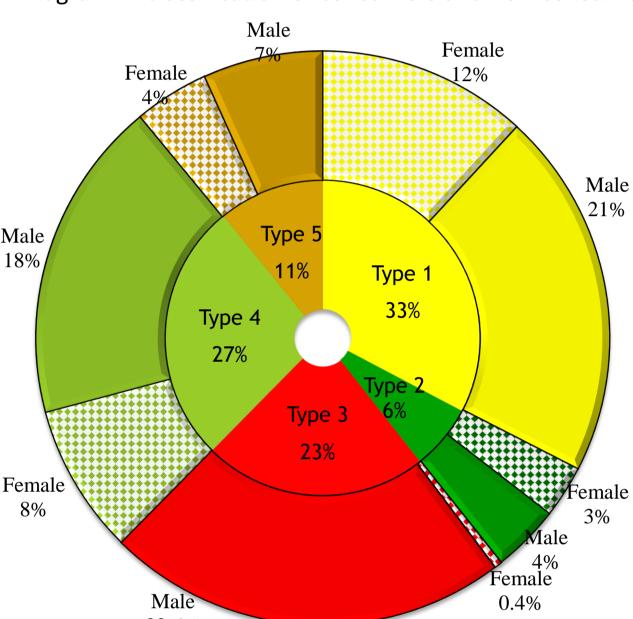


Diagram 2: Types of consumers

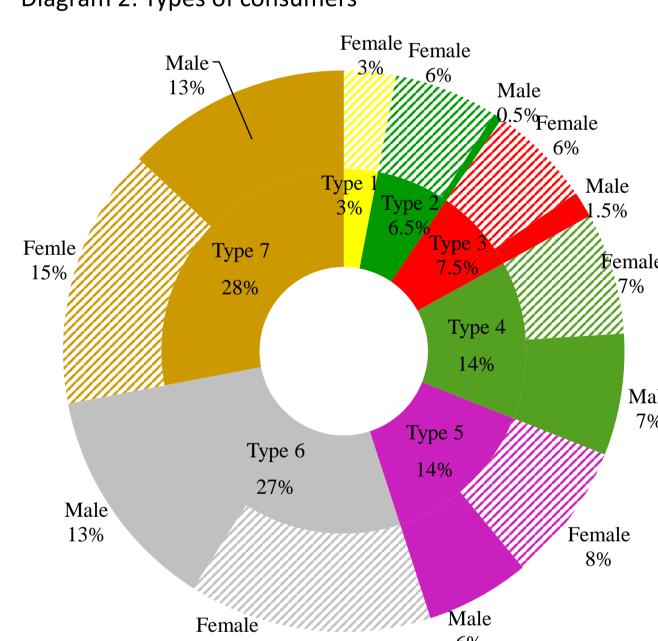


Diagram 3: Types of non-consumers

Conclusions

While delicacy is the most important reason for consuming insects, lack of freshness, high prices and health problems are major hindrances. Religious and cultural issues do not play a major role. To overcome the constraints, gender-differentiated strategies are necessary according to each of the nonconsumer group. Public awareness building on insect collecting methods (e.g. use of light traps, not chemicals) would be important for Type 1 and Type 5. Promotion of processed insect products may overcome Type 3 rejections. In addition, hygiene standards and regulations may help convince Type 7. Finally, the problem of limited supply and high prices (Type 6) could be solved by increased production through systematic rearing.

Tropentag 2019 in Kassel, 18-20 September





















ProciNut is financially supported by the German Federal Ministry of Food and Agriculture (BMEL) based on the