Insects as Food: Market Potential

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Outline

1. Industry reports
2. Edible insect market segmentation
3. Current market estimations
4. Future market projections
5. Major/significant edible insect companies
6. Conclusions
Industry Reports - Estimations of Market Size

- Mid-2016: publication of edible insect industry reports by 4 market research companies (Singapore/US):
  - Estimation of current market size (2015-16) by region/countries, insect species, insect applications (products) & overview of major/significant edible insect companies
  - Projections of market size & Compounded Annual Growth Rate (CAGR) over the mid-term: 2015/16 - 2021 - 2023 - 2024
  - Fragmented information available: price for reports USD5,000-11,000
  - Similarities in estimation of current market size & trends, but different projections of future growth & market value
Market Segmentation

EDIBLE INSECTS MARKET SEGMENTATION

SEGMENTS
- RAW
- COATED
  - BARS
  - CANDY
  - CHOCOLATE
  - COOKIES
  - CHIPS
  - CRACKERS
  - SNACK PACKS
  - OTHERS

POWDERED
- FLOUR
- BAKING POWDER
- PROTEIN POWDER
- POWDERED SALTS
- OTHERS

INSECT TYPES
- BEETLES
- CATERPILLARS
- BEES, WASPS AND ANTS
- GRASSHOPPERS, LOCUSTS AND CRICKETS
- CICADAS, HOPPERS, SCALE INSECTS, TREE BUGS
- TERMITES
- DRAGONFLIES
- FLIES
- OTHERS

REGIONS
- NORTH AMERICA
- ASIA-PACIFIC (APAC)
- EUROPE
- CENTRAL/ LATIN AMERICA (CALA)
- MIDDLE EAST AND AFRICA (MEA)

Source: ARCLUSTER Research, 2016
Current global market: By Regions

Overall global market estimations:
- 2016: USD 106 million

By Regions:
- Main global market player: Asia - leading countries Thailand, China & Vietnam
- Asia Pacific: >USD 12 million
  - Drivers: insect farming, low raw material cost & transportation cost
- Europe: leading countries UK, Belgium, France & Netherlands
- Latin America: Brazil & Mexico largest markets - insects used as traditional food & for medicinal purposes
- Middle East & Africa: no data
Current global market: By Insect Species

**Beetles:**
- In Asia Pacific: largest market share with 34% (2015)
- In North America: Caterpillars & Beetles >45% market share (2015)
- In Europe: 30% market share (2015)
- In Middle East & Africa: 36% market share (2015)

**Caterpillars:**
- Global: 18% market share
- In North America: Caterpillars & Beetles >45% market share (2015)
Current global market: By Application/Product

Whole insects:
- Most commonly traded & commercially consumed - 65% global market share (2015) (mass volume/tons???)

Coated & Powdered:
- Insect-based powder & energy bars >54% of global market share (2015) (revenue???)
- Insect powder: >40% of market share in Central/Latin America
Global market projections

- Significant accelerated growth of global edible insect market expected
- Insect production expected to increase particularly in U.S., UK, China & Brazil
- Different projections

- 2021: USD 1.5 billion - 70% CAGR from 2015
- 2023: >USD 522 million - 42% CGAR from 2016
- 2024: USD 723 million - 6% CGAR from 2016
Growth projections by region

Asia Pacific:
- Dominate global market - 5% CGAR (2024)

North America:
- Significant growth
- led by U.S.: >USD 50 mill. (2023)
- Drivers: strong consumer awareness levels & acceptance

Europe:
- Fastest growing market - >USD 46 mill. (2023)

Central/Latin America:
- >USD 55 mill. (2023)

Source: Global Market Insights, 2016
Growth projections by Insect Species

Beetles:
- Slight decrease in market share: from 31% to 29% in 2024

Grasshoppers, locusts, crickets:
- Significant growth
- Drivers: demand for cricket bars, crackers & cookies
Growth Projections by Applications/Products

Coated & Powdered:

- Major trend: protein bars & shakes
- Coated products: highest growth by 85% (2021)
- 30-times growth of revenues from packaged, processed & powdered (2015-21)
Market competition

- Assessed as fairly competitive

- Major players:
  - Kreca (Netherlands): [http://www.krecafood.com](http://www.krecafood.com)

- Other significant players:
  - Proti-Farm (Netherlands) [http://protifarm.com](http://protifarm.com)
  - Chapul Inc. (U.S.) [http://www.chapul.com](http://www.chapul.com)
  - Eat Grub (UK) [http://www.eatgrub.co.uk](http://www.eatgrub.co.uk)
  - Bitty Foods (U.S.) [https://bittyfoods.com](https://bittyfoods.com)
  - Edible Inc. (Korea) [https://edible-bug.co](https://edible-bug.co)
  - Thailand Unique (Thailand) [http://www.thailandunique.com](http://www.thailandunique.com)
Conclusions

- Global edible insect market reached already significant scale & accelerated growth in mid-term expected
- Major regions so far Asia Pacific, but significant growth in Europe, North America & Latin America expected
- Whole insects currently dominate market, but trend of further processing into powder & coated
- Beetles currently main species, but significant increase of crickets in market share expected

Key Challenges:

- Consumer acceptance: psychological aversion in combination with religious and cultural believes
- Regulatory environment
Information on Market Research Companies

- **ARCLUSTER**: Innovation design and market consulting company; Singapore. [https://arcluster.com/about-us/](https://arcluster.com/about-us/)
- **Credence Research**: Worldwide market research and counselling firm; United States. [http://www.credenceresearch.com/info/about-us](http://www.credenceresearch.com/info/about-us)
- **Global Market Insights Inc.**: Global market research and management consulting company; United States. [https://www.gminsights.com/about-us](https://www.gminsights.com/about-us)
Thank you for your attention!
Any Questions?

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Literature:


