Is the household food waste bin a source of potential health impacts?

Other

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1. Food waste – The problem

- Food waste refers to any food and inedible part of food which is discarded or intended to be discarded.
- Globally, \( \frac{1}{3} \) of total food production made for human consumption is wasted yearly\(^1\).
- Food waste is responsible for 6% of global greenhouse gas emissions\(^2\).
- In UK, almost 10 million tonnes of food is wasted with a value of over £30 Billion.
- UK households alone generated 6.6 Mt of food waste in 2018\(^3\) as shown in figure.

2. The Impacts of food waste

- **Indoor storage**: Increase microbial contaminations inside homes.
- **Collection**: Emission of airborne microorganisms (Bioaerosols).
- **Processing**: Bioaerosol emissions from composting, anaerobic digestion and landfilling sites. It may cause allergic and respiratory disorders in the householders.

3. Project objectives

- Microbiological characterisation of food waste materials in the laboratory including identification of pathogens.
- Understanding the role of microorganisms in the breakdown of the food waste materials.
- Identification and measurement of biological agents arising from household food waste that can cause health problems in key-populations (householders, waste handlers).
- Determination of potential exposure routes of bioaerosols for the householders and waste handlers.
- Provision of information regarding risk and health issues for the waste industry in terms of separate storage, collection and processing of food wastes.

4. Methodology

- **Sampling**
- **Cultivation**
- **Non-cultivation**
- **Identification**
- **Bioaerosol sample collection**
- **Bioaerosol emissions?**
- **Health hazards?**

### References

1. FAO 2019. The state of food security and nutrition in the world.