Assessment of the nutritional value, techno-functional, and *in vitro* physiological properties of six edible insects

Yolanda Aguilera [1,2], Miguel Rebollo-Hernanz [1,2], Irene Pastrana [1,2], Vanesa Benitez [1,2], Gerardo Alvarez-Rivera [2], Jose Luis Viejo [3], and Maria A. Martin-Cabrejas [1,2]

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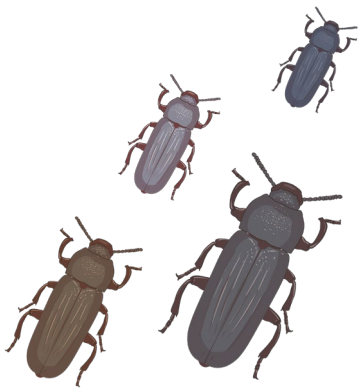
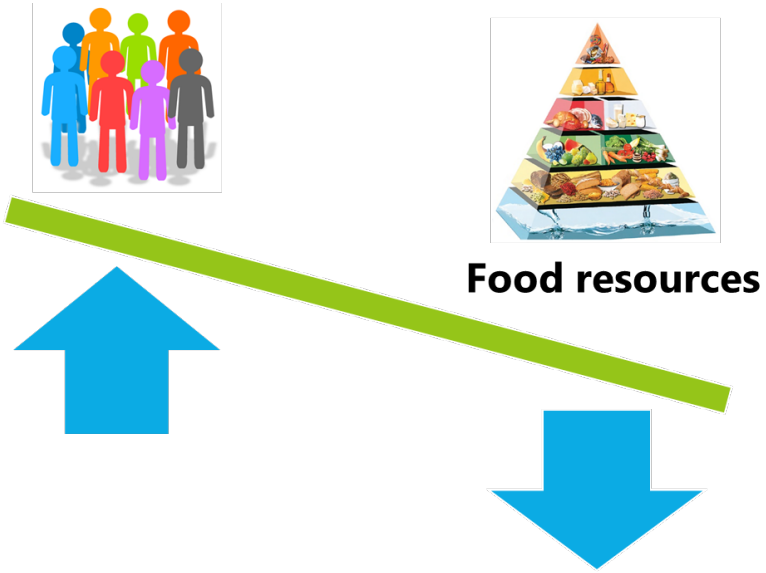
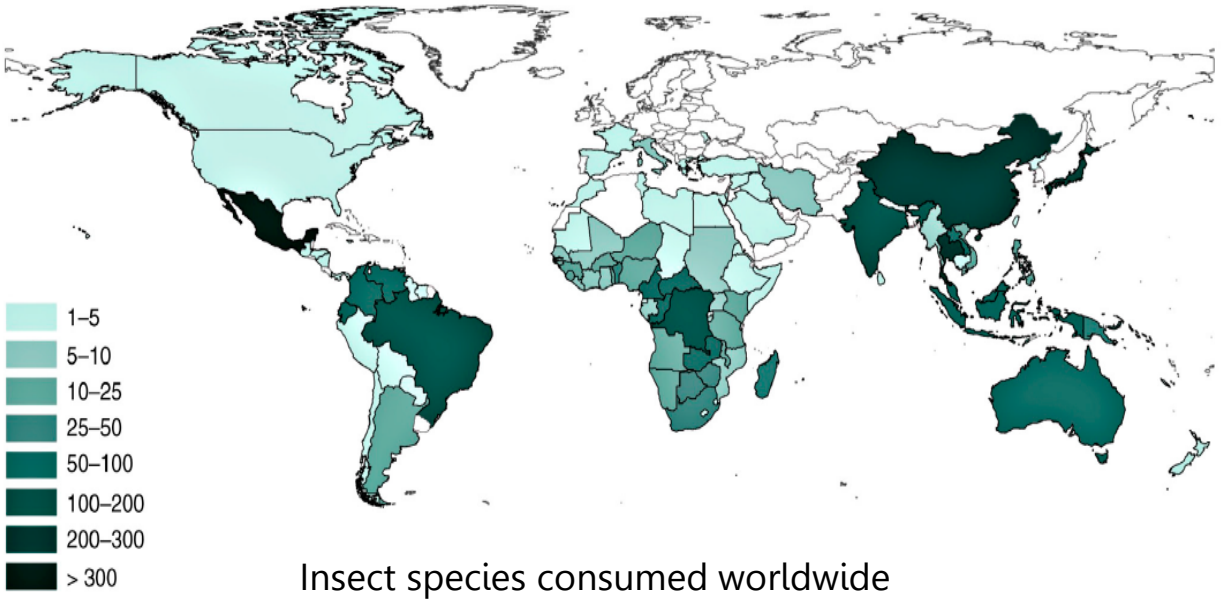


INTRODUCTION

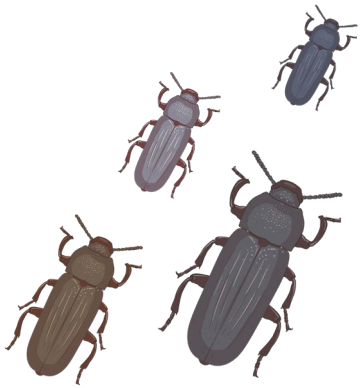


New **sustainable alternatives**



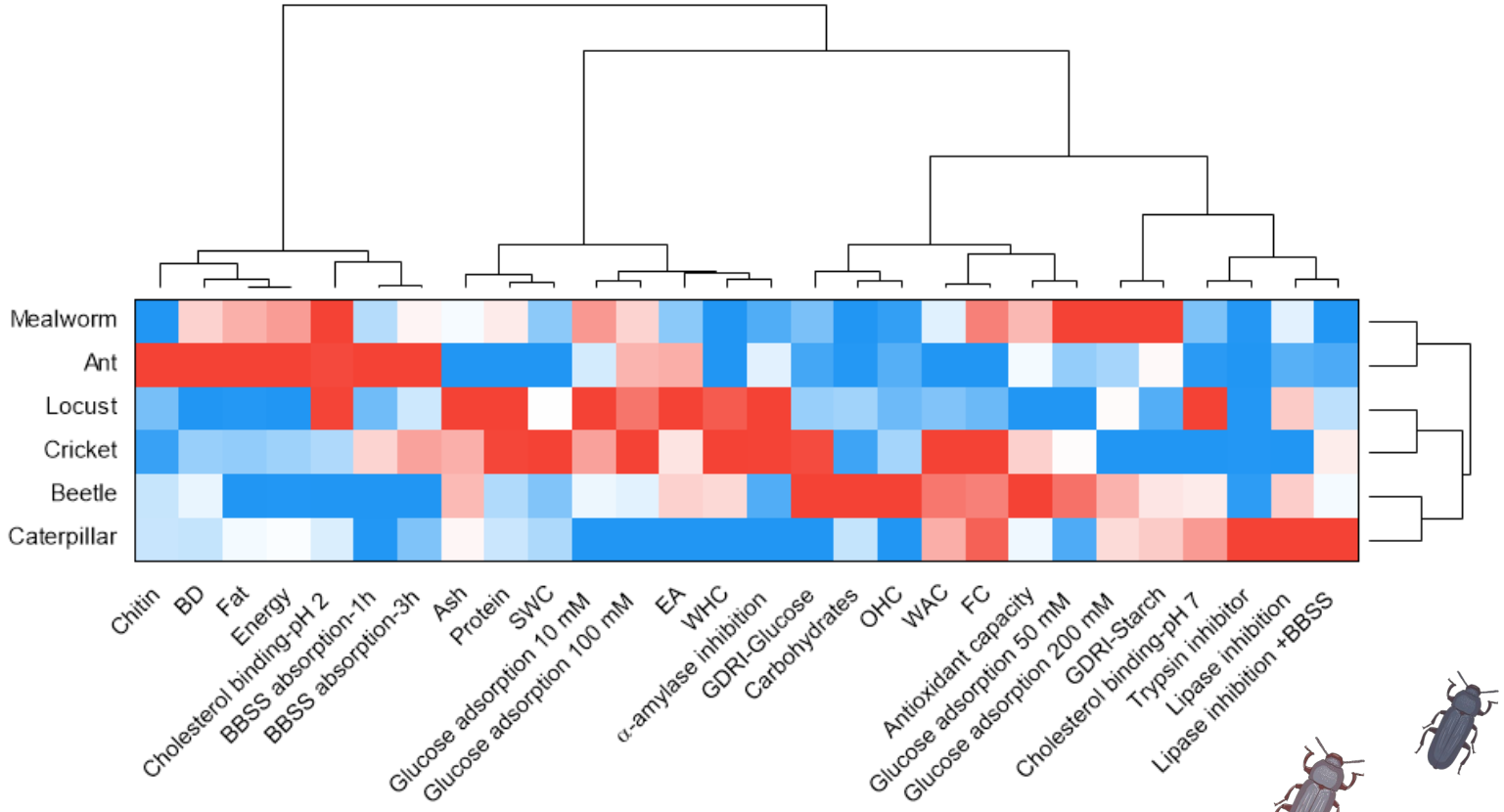
Insect species consumed worldwide

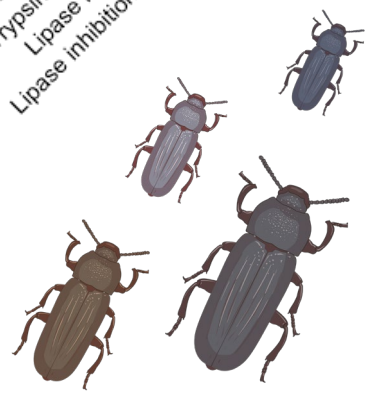
- Insects are presented as a feasible solution to the global food shortage due to overpopulation, estimated for 2050
- Consumer acceptance remains one of the barriers to their utilization as a protein food source, especially in the developed countries



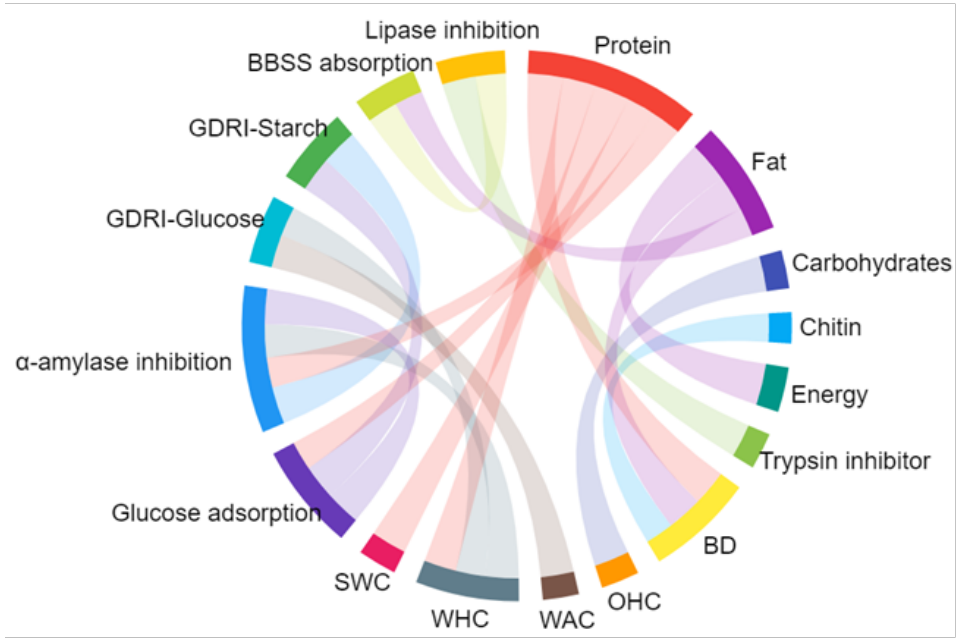
RESULTS

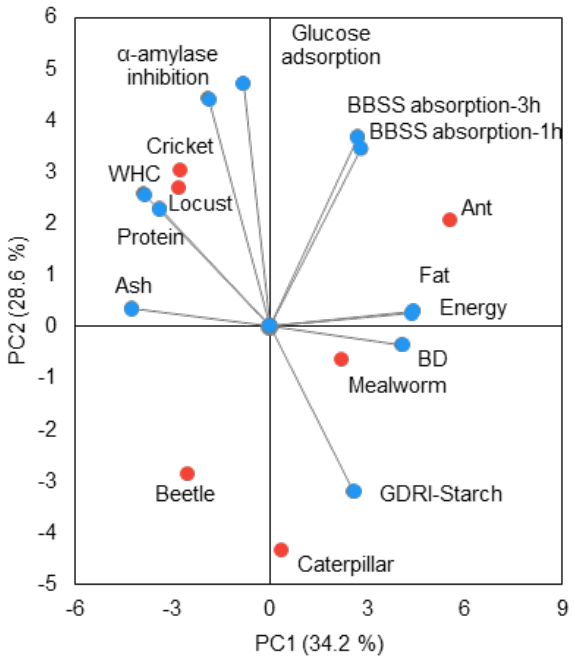
- Insect flours are a sustainable source of protein, chitin, and lipids
- Insects flours' physicochemical and techno-functional properties validated their use in food production



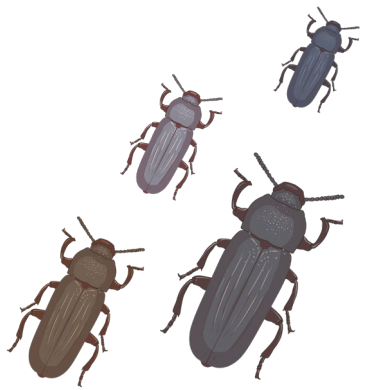


RESULTS



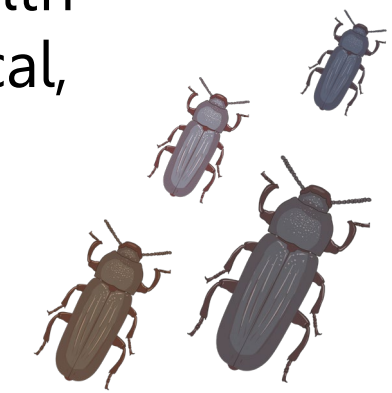


- Insect flours could inhibit intestinal glucose and lipids absorption
- Insect flours were statistically classified according to their composition and properties



CONCLUSIONS

- Insects are a sustainable source of protein, chitin, and lipids.
- These flours foods may be valuable due to their physiological effects related to their hypoglycemic and hypolipidemic properties.
- These flours presented several applications due to their techno-functional properties.
- Upcoming works will extend the data presented in this study with the *in vivo* biological properties of insect flours, the technological, and the cooking applications.



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