

# How to extract and benefit from insect oil?

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Surprised to see how the Dutch people, whose culture is alien to the consumption of insects, have expressed interest in entomology with a scientific and commercial vision, a Mexican researcher is working on a project that seeks to exploit the oil and protein of arthropods.

PhD Daylan Tzompa-Sosa, [postdoctoral fellow](#) at the University of

Wageningen in the Netherlands, says that this particular research has made the team into a world leader in the field. "The project came about because five years ago there was a boom of Dutch companies growing insects for consumption."

The idea of such companies was to produce protein alternatives to red meat, because cattle breeding generates a lot of pollutants, while insects can be grown in an environmentally responsible manner. "The Dutch are not used to eating crickets or worms, so various companies have focused on isolating the proteins for use as a powdered ingredient that can be added to food."

The research team explored whether the fat of [insects](#) could be used as an ingredient for bakery products, ice cream and dressings, since it has a high content of omega-3.

"It is important to have a good consistency, taste and smell; in fact, there are some species that generate oils with fruity aromas, such as the grasshopper and the soldier fly; in comparison, the cockroach smells awful and is not suitable for food, but the fat itself might be used in skin tanning or as a useful lubricant in some industrial sectors," she explains.

Notably, the project is at an early stage, as they are experimenting with different types of fat removal, as well as chemical and physical characterization of the oil.



Insect oil. From right to left, (YM) flour maggot; (LM) beetle larvae; (CR) cockroach; (CO) cricket.

"In fact, the research I do is quite basic, with no applications yet because it is a long-term [project](#) that will lay the groundwork for future developments," says the expert, who believes that Mexico has great potential to develop the insect protein industry. She emphasizes that all the elements to achieve this outcome are available, but someone needs to see it as a business.

Provided by Investigación y Desarrollo

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