

From farm to table, mealworms may be the next best food

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Food enthusiasts interested in sustainable farm practices may soon have a new meat alternative: insects. Beetle larvae (called mealworms) farms produce more edible protein than traditional farms for chicken, pork, beef or milk, for the same amount of land used, according to research published December 19 in the open-access journal *PLOS ONE* by Dennis Oonincx and colleagues from the University of Wageningen, Netherlands.

The researchers compared the environmental impact of meat production on a mealworm farm to traditional animal farms using three parameters: Land usage, energy needs, and greenhouse gas emissions. From the start of the process to the point that the meat left the farm, they found that mealworms scored better than the other foods. Per unit of edible protein produced, mealworm farms required less land and similar amounts of energy.

Previous work by the same team, published in [PLOS ONE](#) in 2010, has already shown that mealworms themselves produce less [greenhouse gases](#) than other animals grown for meat. In this new study, the researchers elaborate on the sustainability of insect proteins as a food by showing that growing mealworms for animal protein requires less land and generate fewer [greenhouse gas emissions](#) than chicken, pork, beef or milk.

Commenting on their results, Oonincx adds, "Since the population of our planet keeps growing, and the amount of land on this earth is limited, a

more efficient, and more sustainable system of food production is needed. Now, for the first time it has been shown that mealworms, and possibly other edible insects, can aid in achieving such a system."

More information: Oonincx DGAB, de Boer IJM (2012)
Environmental Impact of the Production of Mealworms as a Protein
Source for Humans – A Life Cycle Assessment. PLoS ONE 7(12):
e51145. [doi:10.1371/journal.pone.0051145](https://doi.org/10.1371/journal.pone.0051145)

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