Research Insights

Insect Farming INITIATIVE

Nutritional Benefits

- **High protein content:** Insects contain 40–75% crude protein (depending on species and processing).
- **Essential amino acids:** Comparable to meat, fish, and soy, some insects have increased lysine and methionine, valuable to organic farms.
- **Rich in micronutrients:** High levels of iron, zinc, calcium, magnesium, and B vitamins.
- **Healthy fats:** Polyunsaturated fatty acids (PUFAs), including omega-3 and omega-6.
- **Fiber content**: Chitin provides dietary fiber and may have prebiotic effects.

Environmental & Economic Benefits

Efficient Feed Conversion

Insects require approximately **2 kg of feed** to produce **1 kg of body mass** which is better than most other traditional protein sources.

Minimal Water Use

Insects require **5x less water** than traditional protein sources.

Waste Upcycling

Insects can be fed on **agricultural byproducts** and food waste, contributing to circular economy models.

Future Prospects

Biotechnological Advancements

Enhanced breeding and automation in insect farming, including on farm production for increased income or integration into animal feed, pathogen surveillance on insect farms.

Insect-derived Bioproducts

Chitin for bioplastics, insect oil for biodiesel, and antimicrobial peptides for pharmaceuticals, waste management agents, among others.

IFI Webinar Series Kickoff

Friday, May 30, 9 a.m. CST

Join us as we kickoff our Insect Farming Initiative (IFI) Webinar Series! We'll be covering a variety of topics centered around insect farming. Our speakers include global leaders and professionals who are eager to share their insights, research and beyond.

Insect Farming INITIATIVE
WEBINAR SERIES

Frass & Furious

Insect frass as a fertilizer

Dr. Christos Athanassiou
UNIVERSITY OF THESSALY
Volos, Greece

Scan QR Code to register for our future webinar!
Visit **ksu.edu/insectfarming** or email entomology@ksu.edu for questions.