



Insects, a future source of valuable animal feed in the Caribbean

Exploring insect farming as a sustainable solution to organic waste disposal and animal feed production.

March 2, 2022. The rising costs and limited access to high quality animal feeds are constraining factors for the development of the poultry and livestock sectors in the Caribbean and a threat to food security in the region. There is also a growing problem of managing organic waste from our farms, markets, restaurants, hotels and food manufacturers that create health, environment and climate risks.



1. Chicken Farm (c) FAO Ricchardo De Luca

In examining solutions to these challenges, the Food and Agriculture Organization of the United Nations (FAO), in collaboration with the Fera Science Limited, recently completed a survey of organic waste across Barbados, Jamaica, Grenada, and Trinidad and Tobago. The study assessed the potential of insect farming as a solution to the twin problem of increasing volumes of organic wastes, and the lack of stable access to affordable animal feed.

Insect farming is widely regarded around the world as one of the key solutions to reducing waste in the environment and creating sustainable sources of animal feed. In this process, selected insect species efficiently convert organic waste (biomass), through their natural ability to upcycle waste material, into high-quality products, suitable for agriculture and animal feed industries.

The black soldier fly larvae is the main insect being farmed – it is one of nature's recyclers, and rapidly consumes wastes and turns it into larvae that are enjoyed by

chickens and fish as a natural feed. Insect farming provides a sustainable solution that complements existing community vermi-composting schemes and enables the creation of fertilisers, animal protein feed, oils, and new valuable products by making better use of organic wastes.



2. Chicken Farmer (c) FAO Luis Tato

Renata Clarke, FAO Caribbean Sub-regional Coordinator, stated that, “Waste materials identified in the study could sustain the growth of enough insects to achieve 50 percent inclusion into poultry feed for the entire poultry population in the countries studied. This would reduce the reliance on tonnes of soy and other costly and unsustainable sources of protein such as fishmeal from ocean ecosystems. Commercial development of new sources of safe and traceable proteins is essential to meet the needs of growing populations, especially with increased consumption of meat, fish and eggs.” She added, “The Caribbean poultry sector would become less vulnerable to external shocks, more environmentally friendly and create new economically viable feed businesses accessible by small-scale entrepreneurs and communities”.

As an introduction to this innovation, FAO, Fera, and the University of the West Indies are developing a regional pilot project to showcase the value of insect farming and provide the catalyst for a series of community projects focused on creating sustainable animal feed from organic wastes.

Damian Malins from Fera Science Limited said, “We are very excited to be working with FAO and the University of the West Indies, to establish insect farming in the region.” He continued, “The pilot project will engage farmers, communities, ministries and a range of private sector partners to create a best practice for future insect farmers. It will also create a community solution to reducing wastes and creating an affordable, sustainable animal feed”.

The findings of the FAO study will be discussed with all interested stakeholders in a virtual forum in March with implementation of the pilot project set to begin by mid-year.

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