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POSITION STATEMENT ON INSECT FARMING

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‘Factory-farmed insects producing feed for factory-farmed pigs and poultry ... would create suffering on a massive scale for the pigs and chickens and, potentially, on an astronomical scale for the insects. All of this to waste grain which could have fed the hungry.’¹ Phil Brooke, CIWF

Compassion in World Farming believes that industrial farming of insects will cause serious animal welfare and sustainability concerns, particularly, where intensively-reared insects are fed grain for the purpose of producing feed for other factory farmed animals.

Where insects are reared on a small scale on waste products, they should always be treated in ways that respect the biological, behavioural, and sentient needs of the species concerned. Where evidence of sentience is limited, the insects should be given the benefit of the doubt.

Insects absolutely should not be reared intensively as feed for factory farmed animals.

Background

Interest in insect farming has increased in recent times as a potential source of protein for animal feed and human consumption. Insects are already part of the diet of about two billion people, especially in tropical regions with high levels of biodiversity.² Beetles, butterflies, moths, crickets, grasshoppers, wasps and ants are among the most popular insects consumed,³ with most of them harvested from the wild⁴ before being steamed, roasted, smoked, fried or put in a stew.

Although eating insects has limited appeal in the West, it hasn't deterred some entrepreneurs attempting to create a market for insect products. Insect burgers made from buffalo worms and organic soya for example have started to be served in Brussels restaurants and supermarkets. To overcome Western sensibilities, farmed insects are powdered or turned into flour in ways that disguise their origins.⁵

As the idea of eating insects has increased, so too has the industry around farming them. In North America and Europe, insects are raised under controlled conditions before being killed by freezing or shredding.⁶ They are then freeze-dried, packed, or pulverised, before either being eaten as they are or added to burgers, bakery products or snack bars.

However, the farming of insects appears to be taking hold more concertedly for the purpose of producing animal feed.

¹ Brooke, P., 2018. Farming insects for food or feed. In: Farming, Food and Nature: Respecting Animals, People and the Environment. Routledge: Abingdon. Page 195

² <https://onlinelibrary.wiley.com/doi/abs/10.1002/ajhb.22976>

³ van Huis, Arnold. *Edible Insects: Future Prospects for Food and Feed Security*. Rome. ISBN 9789251075968. OCLC 868923724

⁴ <https://onlinelibrary.wiley.com/doi/full/10.1111/1541-4337.12463>

⁵ <https://onlinelibrary.wiley.com/doi/full/10.1111/1541-4337.12463>

⁶ <http://venik.nl/site/wp-content/uploads/2013/06/Rapport-Large-scale-insect-rearing-in-relation-to-animal-welfare.pdf>



False Economy

Insect farming, whether for food or feed, uses more food than it produces. Like other intensively farmed animals, insects are commonly reared on cereals and soya. Insects are less resource-intensive than traditional farmed animals – but that is more a reflection of how inefficient cattle, chickens and pigs are at converting grain into animal protein than an endorsement of insect farming.

Scientific studies have looked at the ‘feed conversion ratio’ (the amount of feed in compared with the amount of food out) of farmed insects. It has been found to be marginally better than carp, twice as efficient as chicken and nearly twenty times better than beef.⁷ Black soldier flies and Argentinian cockroaches are among the most efficient insect species, with food conversion ratios of between 1.4 and 2.7 to one, but even they eat much more feed than they produce.⁸

Added to which, the consumption of insects is not without safety concerns; they have been shown to accumulate hazardous chemical pesticides, heavy metals, pathogens and allergens.⁹ On giving the yellow mealworm (larvae of the beetle, *Tenebrio molitor*), legal approval as the first insect as ‘novel food’, the EU Commission noted that consumption “may potentially lead to allergic reactions”.¹⁰

A further risk that needs much greater attention is the impact of escapes from insect farms on the environment.

Flawed Thinking

The main reason put forward for insect farming is the need to feed a growing population, a false argument as there is already enough food grown worldwide to feed twice the current human population. One of the main reasons for people going hungry globally is because four billion people’s worth of food is fed to livestock, whether chickens, cows, or crickets. Industrial-scale insect farming therefore undermines our ability to produce food enough for everyone now and in the future.

Chemicals

The industrial production of livestock – insects or otherwise – relies on the industrial production of cereals, which usually means spraying the countryside with insecticides. So, to produce one set of insects we wipe out another, impoverishing an ecosystem and leaving the songbirds and other creatures that rely on wild insects for food to go hungry in the process.

⁷ Lundy, M.E. and Parrella, M.P., 2015. Crickets are not a free lunch: protein capture from scalable organic side-streams via high-density populations of *Acheta domesticus*. *PLoS one*, 10(4), p.e0118785.

⁸ Oonincx, D.G., Van Broekhoven, S., Van Huis, A. and van Loon, J.J., 2015. Feed conversion, survival and development, and composition of four insect species on diets composed of food by-products. *PLoS One*, 10(12), p.e0144601.

⁹ <https://onlinelibrary.wiley.com/doi/full/10.1111/1541-4337.12032>

¹⁰ https://ec.europa.eu/food/safety/novel_food/authorisations/approval-first-insect-novel-food_en



There is an irony then in our turning to insects to feed us while also waging war on them in the countryside. Chemical sprays kill insect communities indiscriminately and often for several years, undermining the sustainability of our food.

Welfare Concerns

Although scientific understanding of the inner workings of insects is limited, there is evidence that they have the capacity to suffer. They have receptors that sense heat or injury, while honeybees have been shown to have the capacity for optimism and pessimism. Ants teach each other where to go for food, with teachers having less patience with slow learners. When matabele ants are injured during raids on termite colonies, they are carried home and their wounds are licked to prevent infection. But the most intriguing behaviour by ants is their response to the 'mirror test'. If a blue dot is painted on their head and they see it in a mirror, they will try to clean it off. Such a response is regarded by scientists as proof of self-recognition; that the ants can see themselves¹¹ is further evidence that insects should be treated with compassion.

Essential for Sustainability

Without insects, the world would be a very different place; in the countryside, they are essential for pollination and the decomposition of organic matter into the soil, as well as feeding the web of life on which we all depend. Without bees, your local supermarket shelves would look very different. There would be no tomatoes, chilli peppers, courgettes, blueberries, raspberries, runner beans or cucumbers – the list is endless.

Making Peace

Making peace with insects is essential if we are to transition to a food system that is healthy, humane, and regenerative. Wild insects are a key component of regenerative farming, where they can be used instead of damaging chemicals to tackle those insects considered 'pests'. The intensive farming of insects cannot be justified in terms of producing food for people or animal feed – it wastes more food than it makes. Treating insects with compassion and respect and as an essential part of our ecosystem is crucial in creating a food system fit for the future.

Compassion in World Farming International is a registered charity in England and Wales, registered charity number 1095050, and a company limited by guarantee in England and Wales, registered company number 4590804.

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¹¹ Brooke, P., 2018. Farming insects for food or feed. In: Farming, Food and Nature: Respecting Animals, People and the Environment. Routledge: Abingdon. Pages 181-197