

Incredible insects



They might be creepy and a bit crawly but there's a lot to be said for bug-based pet food...

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With a growing focus on the sustainability of our food sources, for both humans and animals, insects as a food source may well be the future. We know there's only a limited amount of land on the planet that's available for agriculture, and it's becoming more apparent that animal agriculture, and the rearing of livestock for meat, has a negative impact on the environment. For your

human customers, changing the way they eat can be fairly easy, but what about their pets? The ideal food for omnivorous or carnivorous animals, like dogs and cats, is something that's able to meet their protein needs, as well as being good for their health, affordable for their owners, and as sustainable as possible. Sound like a bit of a tall order? Well, perhaps, but insect-based foods definitely seem to tick all the boxes.

Insect proteins in the UK pet industry
In January, the first dog food made from insects was introduced to the UK market by Yora — a more sustainable food that appeals to environmentally conscious dog owners looking to lessen their impact on the planet's resources. It's estimated that the pet food industry is responsible for around a quarter of the environmental impact of meat production in terms of things like land and water use, pesticides, and fossil fuels, and the use of 'alternative' protein sources for pet foods has been talked about for a number of years now.

Now, we have the first insect-based dog food on the UK market, how long will it take for other manufacturers to follow in these footsteps?

The benefits of insects as a protein source
Plenty of different species, both pets and wild animals, hunt and eat insects, and there's already a variety of commercial foods available for fish and birds that contain insects in differing proportions, which makes sense. Insects in the wild are plentiful, and offer animals and birds an easily digestible food source that also contains a nutritious balance of fats, minerals, amino acids, and proteins.

The idea of insects as a sustainable food source isn't new, as conservation and environmental experts have talked about the environmental benefits of insect protein for some time, especially compared to the damaging effects the meat industry can have on

The environmental impact of animal food sources

The kilograms CO2 equivalent associated with producing one kilo of different types of food sources in different parts of the world, according to a study by Ph.D. student Afton Halloran from the Department of Nutrition, Exercise, and Sports at the University of Copenhagen.

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| ● Wild Herring (Norway) - 0.7 | ● Chicken (Thailand) - 4.06 |
| ● Crickets (Thailand) - 1.41 | ● Chicken (UK) - 4.41 |
| ● Crickets (Thailand) - 2.29 | ● Pork (EU) - 4.5 |
| ● Chicken (Denmark) - 2.31 | ● Beef (Mexico) - 178 |
| ● Mealworms (Netherlands) - 2.7 | ● Beef (Belgium) - 238 |
| ● Farmed salmon (Norway) - 2.9 | ● Lamb (Spain) - 45.35 |

the environment.

Someone who was ideally placed to find a solution in terms of pet food is Tom Neish, the founder of Yora. Having developed and launched several successful pet food brands over the last 25 years, Tom had become increasingly concerned about the environmental impact of feeding meat to the 500 million pet dogs and cats worldwide.

"One day, while eating an energy bar made from cricket flour, I realised that insect protein could provide a viable alternative to beef, chicken, and fish," he says, "and the concept of Yora was born."

Extensive research into insect protein for animals was conducted over the next five years, involving entomologists (scientists who study insects) and animal nutritionists, and *Hermetia illucens* grubs were chosen as an ideal source. Not only are they packed with essential amino acids, proteins, fats, minerals, vitamins, and iron, they have a higher percentage of protein than either chicken or beef, and are extremely digestible, even more so than chicken.

"Couple that with the environmental benefits — they consume leftover vegetable matter, grow incredibly fast, and use a fraction of the food, land, and water needed to farm traditional livestock," says Tom, "and I

knew we were on to a winner."

Dog food and beyond
As we know, there are already plenty of food products on the market for birds and fish that contain insects. Fluvial Bug Bites (More info: www.fluvialaquatics.com/uk/fluvial-products/fish-nutrition/), for example, offer a range of insect larvae recipe fish food which contains up to 40 per cent insect protein and is made from the same insect as in Yora dog food — black soldier fly, or *Hermetia illucens*, larvae. In terms of other pets, when anything new happens in dog food, it does tend to eventually follow in cat food and then in small furies, so we'll no doubt see insect-based cat food coming soon. In fact, there are already plans for Yora to expand into cat food in 2019.

Overcoming the 'creepy crawly' factor
Let's face it, most people when faced with the thought of eating insects aren't likely to react positively — unless it's watching celebrities on TV doing it! While insect protein is being suggested as an answer to environmental issues and global food shortages, thanks to the damaging impact of animal agriculture, the UK public's response to insects as human food is unlikely to be too positive, and that's despite the

Yora's Tom Neish shares the benefits of using insect protein in pet food

- It's a great source of animal protein, packed with essential amino acids, fats, and minerals.
 - It contains no growth hormones.
 - It's hypo-allergenic.
 - It's higher quality with a higher percentage protein content than a lot of conventional dog foods.
 - It's easier to digest than chicken so ideal for dogs with sensitive stomachs.
 - Farming insect protein requires a fraction of the land and water used in beef farming.
- (More info: www.yorapetfoods.com)

fact that people all over the world have been relying on insects as a food source for millions of years. The braver consumers might try edible insects in a themed restaurant, or buy a packet of flavoured bugs as a joke present for a friend, but few would see it more than just a gimmick. But even if people can't be convinced to try insects as a food source themselves, we can definitely promote insect-based pet foods as an environmentally-friendly choice, as Tom explains:

"Dogs require animal protein in their diets and traditionally this has come in the form of meats like beef or chicken. However, as global populations rise, food supply is becoming a critical issue. Farming conventional livestock is very resource intensive, requiring vast quantities of land and water, both of which are becoming increasingly scarce. As a result, we have to consider alternative sources of protein — for both people and pets — and insects can in fact, offer a viable solution."

Demand for sustainable products is already high across all sectors, not just pet food, and it's only going to get more important to the buying public in 2019 and beyond. Global warming and the environmental

impact of food production are hot topics, and more and more consumers are looking at eating more ethically themselves, so what they feed their pets will naturally follow on from that.

"We firmly believe that insect protein will become a key component in both human and animal diets as we are forced to re-think outdated food production systems in order to mitigate the impacts of ongoing climate change," says Tom.

"Imagine the cumulative environmental impact if we can wean the world's pets off meat and onto insects? It's up to all of us to take steps to accelerate the transition to low carbon products and services, and conserve our natural resources."

When it comes to spending money on their precious pets, customers are always going to prefer retailers that understand their needs. The growing preference for sustainable products isn't a trend, it's here to stay, so stocking eco-friendly products is a must for any retailer. And that includes pet food made from alternative protein sources like insects. Consumers are becoming more and more conscientious when it comes to reducing their carbon footprints, and their pets' carbon pawprints. ✓

