

## Waste guzzling fly factory wins African innovation prize

May 8 2013, by Justine Gerardy

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A fly pictured on August 18 , 2012 in Saint-Philbert-sur-Risle, northern France. A fly factory that transforms blood, guts, manure and discarded food into animal feed has walked away with a \$100,000 UN-backed innovation prize.

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The Stellenbosch, South Africa-based initiative uses the prolific egg

layers to recycle industry's cast-offs into reusable protein by mimicking nature and harnessing the winged insects, usually regarded as [pests](#).

"We've created the first industrial farming operation for [flies](#)," said Jason Drew of AgriProtein Technologies which devised the concept.

The flies, which are fed human grade food, lay eggs which are collected and added to the waste where they hatch into [larvae](#).

The larvae munch through the waste and are then harvested, dried and ground up into the consistency of cornflakes and sent to a feed manufacturer.

"Our factory looks like a very big cage full of flies," Drew told AFP after the award was presented Tuesday.

The flies are trained to lay eggs in one place by creating their ideal conditions.

"We take their eggs out, we put the eggs onto that waste and at the end of 72 hours, one kilo of eggs turns into about 380 kilos of larvae," said Drew.

The dried larvae have the same composition as fishmeal, commonly used in feeds and drawn from the sea.

The initiative signals a way to use discarded waste while finding a new source of protein, said Drew.

"We take food from food factories, we take blood and guts from slaughter house, we take animal poo from concentrated [farming operations](#) and we use different species of fly to eat and combine those wastes," said Drew.

"We might not think those are attractive things but flies love that sort of stuff. It's what nature invented the fly for—to recycle that protein," he added.

Citing the concept as "Mother Nature's invention", Drew said the firm had spent the past five to six years working out how to get billions of top egg-laying flies and larvae to work together.

The factory won the Innovation Prize for Africa, a joint initiative of the United Nations Economic Commission for Africa and the African Innovation Foundation.

The prize was awarded in Cape Town late Tuesday, and more than 900 applications were received from 45 countries.

A large-scale fly factory produces 90 to 100 tonnes of protein a day, some 28.5 tons when dried.

A smaller unit has been developed for rural areas where small scale animal owners can recycle their waste.

The firm has had interest from nearly 30 countries wanting to license the technology, said Drew.

"We take it for granted that we should recycle our tin, our plastic and our paper," said Drew.

"Within 10 years from now, we will consider it normal to recycle our [waste](#) nutrients."

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