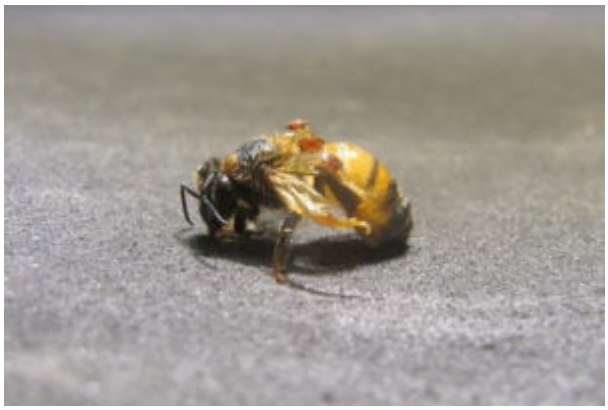
Next generation GMOs? Monsanto experiments with modifying crops by spraying them with RNA

Using RNA interference technology, which temporarily turns off the activity of a gene, Monsanto thinks it has hit on an alternative to conventional GMOs that could kill crop pests and temporarily alter a plant's traits.

The RNA interference sprays, which Monsanto calls BioDirect, are made from a ubiquitous molecule that degrades quickly in soil. They can be precise enough to kill potato bugs but spare ladybugs. And so far, consuming RNA appears no more toxic to people than drinking a glass of orange juice.

As Monsanto put it, "humans have been eating RNA as long as we have been eating."



Monsanto is exploring the use of RNA interference to kill a mite that may play a role in bee die-offs. (Monsanto)

Last year the U.S. Environmental Protection Agency asked experts to help it decide how to regulate RNA insecticides. In a letter to the agency, Monsanto lobbied against any special rules. It said RNA products should be spared safety tests it called irrelevant.

The EPA's advisors agreed there was little evidence of a risk to people from eating RNA. But is there ecological risk? The EPA's advisors say that the "potential scale" of RNA used in agriculture "warrants exploration of the potential for unintended ecological effects." RNA may be natural. But introducing large amounts of targeted RNA molecules into the environment is not.

Yet the biggest challenge to RNA sprays, Nitzan Paldi, an Israeli entrepreneur, told me, can be summarized in a single word: Monsanto. "For half the world, that is enough to know it's evil," he says. "But Monsanto is also the best way to make this real. For the scientifically literate, this is the dream molecule."

The GLP aggregated and excerpted this blog/article to reflect the diversity of news, opinion and analysis. Read full, original post: The Next Great GMO Debate