

Researchers suggest GMO oilseed crop led to deformed butterflies, critic questions study design

The GLP aggregated and excerpted this blog/article to reflect the diversity of news, opinion and analysis.

... Scientists at the government-funded Rothamsted Research institute in the UK have been developing omega-3 fatty acids in the oilseed crop camelina, using genetic engineering to transfer the relevant genes into the target plant. The object is to develop a sustainable source of feed for fish farming. ...

... Would the omega-3 fatty acids EPA and DHA which are produced by the camelina affect insects consuming the crop? A [new study published in PLOS One](#) aimed to examine this question, using lab-reared cabbage white butterflies. ... The study, authored by Hixson et al, fed their lab-reared caterpillars artificial feed, some with the EPA and DHA fatty acids, and a control group without.

The results? Supposedly the groups fed the novel fatty acids got higher levels of wing deformities. And hence the predictable [howls of outrage from the anti-GMO lobby](#) ...

... So let's look at the study methodology. ... [F]ully a third of the controls also had deformed wings, an inconvenient fact that the anti-GMO people predictably failed to note.

So why the deformed wings? The study authors admit that they got the humidity wrong when raising the insects and that high humidity atmosphere is associated with wing deformities ...

In any case, the entire exercise is unfortunately rather irrelevant, as Rothamsted has gently pointed out in a response statement. ...

Rothamsted scientists have confirmed that there is no EPA and DHA expressed in the camelina leaves at all, because its expression is controlled by a seed-specific promoter. Cabbage whites don't eat brassica seeds, so the whole experiment is rather pointless. ...

Read full, original post: Deformed GMO Franken-butterflies? Not so fast...