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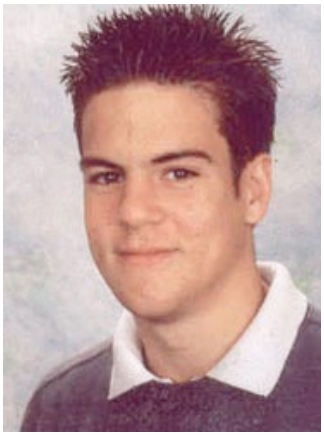
Mice Prefer Non GM

A Dutch farmer left two piles of maize in a barn infested with mice, one pile GM, the other non GM. The GM pile was untouched, while the non GM pile was completely eaten up. Incredible! Young undergraduate Hinze Hogendoorn devised his own laboratory tests and confirmed the finding, and more. Dr. Mae-Wan Ho reports from her recent visit to Hilversum near Amsterdam, where he lives with his mum.

Mum Guusje is very proud of her son, though she waited until he took the train back to University College, Utrecht, to tell me about it. A young activists group (Jongeren Milieu Aktief) presented the report Hinze has written to the Dutch parliament on 11 December, and is featuring it on their new website (www.talk2000.nl).



Dutch undergraduate Hinze Hogendoorn.

Hinze couldn't find a single scientific report on animals being tested for preference of GM versus non GM food on the web when he began. On extending his search to effects of GM foods on animals, he came across reports from companies developing GM foods, all declaring there were no adverse impacts. But he also came across independent researchers who have reported harmful effects, including Dr. Arpad Pusztai, who found GM potatoes damaged the kidney, thymus, spleen and gut of young rats. Hinze was disturbed, not just by the scientific findings, but by the fact that scientists opposing the big companies are so easily discredited. "Personally, I'm afraid these companies have too much interest invested in their products for their research to be creditable." That was another motivation for him to do his own experiments.

The 17 year-old was stumped at first, because he would have needed to go through a lot of bureaucracy to experiment on animals. However, he managed to rescue 30 female six-week old mice bred to feed snakes from a herpetology centre. The next problem was to find the appropriate food. He went to a website on the care of mice. Mice eat about 15% of their body weight every day, and they need a diverse diet. So he decided to give them a staple food along with the two foods that were to be compared, so they could really show their preference without being starved. For the staple, he used Rodent mix from the pet store, as well as some oatmeal and cereals guaranteed by their producers (Kellogg's and Quaker's) to be 'GM-free' in the Netherlands. For GM foods, he used maize and soya, and the corresponding organically grown versions as non GM. Water was supplied for the mice to drink as they pleased. And he kept track of all the food consumed each day.

Large cages were used so the mice had plenty of room to move around. At the beginning, all the mice were weighed before they were put into the cage with four bowls containing GM and non

GM maize meal, and GM and non GM soya meal respectively. The mice had not eaten for some time, but amazingly, they already showed very definite food preferences. The didn't like soya meal at all, GM or non GM, and only one mouse was found feeding on non GM soya meal for one minute in the 10 minutes they were observed. In the same period, 4 to 8 mice could be found in the bowl with non GM maize, compared to 1 to 3 in the bowl with GM maize.

For the next week, Hinze continued to give the mice GM and non GM maize or soya chunks (which they did eat) in addition to their staple food, and measured the amount of each consumed daily over the next week. In all nine successive observations, more non GM was eaten than GM for maize or soya. In sum, the mice consumed 61% non GM and 39% GM food when given free choice. The results were highly significant, even though Hinze did not perform the statistical test.

For the next experiment, Hinze tested for the effects of GM food. By this time, however, one mouse had died for unknown reasons. So he removed another mouse from the experiment, assigned 14 to the group fed GM food and 14 to the group fed non GM food after weighing them. Over the next 10 days, he kept track of the amount of food that the two groups consumed each day, and weighed the mice, halfway through and at the end of the experiments.

The group fed GM ate more, probably because they were slightly heavier on average to begin with, but they gained less weight. By the end, they actually lost weight. In contrast, the group fed non GM ate less and gained more weight, continuing to gain weight until the end of the experiment. The results were statistically significant.

That was not the only difference observed. There were marked behavioural differences, though Hinze admitted, these were "subjective" and not quantitative. The mice fed GM food "seemed less active while in their cages". The differences in activity between the two cages grew as the experiment progressed, the mice in the non-GM cage were in the exercise wheel more often than those in the GM cage. Hinze also noticed that each time he came into the room, there tended to be more mice in the non GM cage walking or climbing around than in the GM cage.

The most striking difference was when the mice were weighed at the end of the experiment. The mice fed GM food were "more distressed" than the other mice. "Many were running round and round the basket, scrabbling desperately in the sawdust, and even frantically jumping up the sides, something I'd never seen before." They were clearly more nervous than the mice from the other cage. "For me this was the most disconcerting evidence that GM food is not quite normal."

Another "interesting result" is that one of the mice in the GM cage was found dead at the end of the experiment.

He concluded, "At the end of everything, I must admit that the experiment has done nothing to soothe my qualms concerning genetically enhanced food." His results "do seem to agree with Pusztai's".

Hinze is tall and athletic, and definitely doesn't like GM food. He is pleased to have found all that out for himself, and suggests everyone should do the same.

He has put the scientists to shame, especially those who have condemned Pusztai's work, but have done nothing since to add to our knowledge.

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