

Cornell plant geneticist: GMOs not a black and white issue

"The picture is complex, and if you only point to a part of it, you can probably find a part that supports the argument you wish to make," said Dr. Margaret Smith, a professor at Cornell University's Department of Plant Breeding and Genetics. She spoke last week at the Miner Institute in Chazy. She said she was there to talk about GMO foods and the common myths, among them, myths about the human health risks.

Humans do all kinds of dangerous things in everyday life, she said, like driving a car. But she said people don't expect there to be anything even remotely risky about eating foods like corn, and that's why people are worked up about GMOs and genetic engineering.

Smith began her talk with the question, "So, why the controversy?" She explained, "When the first genetically engineered crops came on the market, which was actually in the mid-1990s, people like me—plant breeders and the seed industry—tended to say, 'Oh, gee, it's just a logical extension of what plant breeders have been doing all along.' Well, the problem with that was, basically people said, 'Who? Has been doing what? There has been a profound process of genetic modification since the dawn of settled agriculture until now. Genetic engineering is a new and different way to do that.'"

Smith said the standard tests look at the microscopic proteins inside a genetically engineered food, an ear of corn for example, because it's tricky to test the entire ear of corn itself.

"And this is the part that makes people very nervous. So they will say, 'Well, has that genetically engineered corn been tested for food safety?' Well, no. we tested the protein the Bt gene makes. We tested the protein that the herbicide tolerance gene makes."

She said the way the testing works, scientists would have to feed lab animals nothing but whole ears of corn, or whatever the crop in question. "And it's the same phenomenon as if everyone in this room decided to go on the carrot diet, and we all ate nothing but carrots for a week. Are carrots good for you? Sure. If you eat nothing but carrots and we all come back in here next week, we will all be orange, and we'll have a disease called keratitis."

Smith said, in general, genetically engineered crops are nutritionally equivalent to non-genetically engineered varieties.

The fear that GMO foods are not safe is valid, she said, adding other aspects raise concerns such as the financial power of seed companies like Monsanto, all the herbicides used on genetically engineered crops, and the impact on the larger ecosystem. But, she said a lot of those worries are based on value judgments, not science.

"So this is not a technology we should paint with one big brush, not the 'it's all good' brush, or the 'it's all bad' brush. We need to really think about each example of where we use this technology and weigh the risks and benefits."

Read full, original article: [Dr. Margaret Smith on GMO foods: Not all bad, not all good](#)