BY ISHA SALIAN / MARCH 14, 2017

# Fake news plagues scientists, too

It likely makes its way into a fair share of what you eat—from the Hawaiian papayas at the grocery store to the corn used to feed chickens and beef cows. Genetically modified foods have been on the market for more than 20 years now, but remain at the center of a heated public debate about safety, ethics and the future of food.

The ongoing controversy around GMOs is exacerbated by "fake news," UC Davis plant geneticist Pamela Ronald told members of the Stanford community on Jan. 18.

Ronald, who is also faculty director of the UC Davis Institute for Food and Agricultural Literacy, discussed the challenges she has faced in convincing the public that the GMOs on the market today are safe.

"Every major scientific organization in the world has concluded that the genetically engineered crops that are currently on the market are safe to eat," said Ronald in a talk titled "Tomorrow's Table: Ecologically Based Farming, Plant Genetics and the Future of Food." But, she added, "the public sees just a bunch of acronyms" and inaccurate articles that are "very colorful, very exciting, very persuasive and all over the Internet."

Ronald cited findings from major scientific organizations such as the American Society of Plant Biologists, the National Academy of Sciences and the Centers for Disease Control and Prevention. More than 275 scientific institutions globally(https://www.geneticliteracyproject.org/2015/06/16/275-global-science-organizations-affirm-consensus-gmo-food-crop-safety/) have concluded that today's GM crops are safe, according to the pro-biotechnology nonprofit Genetic Literacy Project.

"It's a struggle that all of us in science have—whether you're a plant geneticist or you work on climate change or you want parents to

vaccinate their children," said Ronald in an interview. "It's really a critical issue that we need to work hard to have people really get accurate information."

Jose Dinneny, a researcher at the Carnegie Institution for Science's Department of Plant Biology, co-authored a letter last year emphasizing that there is "clear scientific consensus" that today's GM technology is both safe and an effective tool to improve food security and decrease the harmful environmental effects of agriculture. The letter(http://cas.nonprofitsoapbox.com/aspbsupportstatement), published in the journal Science and signed by more than 2,000 scientists, warns against fears stoked by a "minority opinion against GM products, in the face of overwhelming credible scientific evidence that indicates their safety."

Dinneny, who recently collaborated with Ronald on a research project, said it's important to remember that "the scientific establishment has not said that we need to stop testing [new GM crops], it's that the current products on the market are safe."

David Lobell, deputy director of Stanford's Center on Food Security and the Environment, invited Ronald to campus for the event. GM technology "hasn't proven as useful as some of the very hyped promises at the early stages," he says. "But it also has had very real positive effects on the environment, on worker health and to some extent on productivity." Proponents of GM technology point to positive effects, including decreased dependence on pesticides and higher crop yields.

Lobell agrees with Ronald about the challenge of communicating science in a world of misinformation. "It seems like we've gotten to this place where credentials don't matter at all," Lobell said. "When the National Academy of Sciences says something, it should matter more than when some person on the Internet says something."

Fake news and misinformation online "is a very old problem," said Jeff Hancock, a Stanford expert on trust and technology. "In general, I think that trust in science is absolutely critical for many aspects of our current society." *(EDITOR'S NOTE: Peninsula Press is a project of the Stanford Journalism Program, based in the Stanford Department of Communication. Hancock is not affiliated with Peninsula Press.)*

But that trust in the scientific process is harder to find when individuals are not getting information from legitimate sources, according to Ronald.

“Good journalism is really, really powerful—but bad journalism is pretty powerful too,” said Ronald. “It’s just going to be an ongoing struggle.”

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