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Biodiversity for a Livable Climate

Restoring Ecosystems to Reverse Global Warming

January 26, 2016

Another Genetically Engineered Crop Contaminates Wild Populations

Photo via The Telegraph

As genetically engineered crops proliferate across the United States, traditional and organic farmers are facing an increasingly common conundrum: how to protect their crops from being contaminated by GM pollen.

The USDA has long asserted that all types of farming (organic, conventional, GMO) can coexist successfully, and that increasing the diversity of crops will benefit

Events

Soil and Nutrition Conference: Nurturing Nature for Food Quality

consumers. The coexistence policy might sound nice in theory, but a recently published study showed that Monsanto's Roundup Ready alfalfa had cross-contaminated wild, or feral, populations of alfalfa in multiple states. In 2011 and 2012, USDA scientist Stephanie Greene and her colleagues tested over 400 feral alfalfa populations from the roadsides of California, Idaho and Washington. They found that 27% of the feral roadside alfalfa tested positive for the Roundup Ready gene. As the surveys were conducted four years ago now, that percentage may have since increased.

A GM alfalfa field. Photo via Oregon Live

Alfalfa is a hardy perennial that can continue growing for years in the wild after it escapes from a field. Greene and her team of researchers determined that the GM gene they found in these populations was spread by bees, which can cross-pollinate alfalfa populations several miles apart. Crops that are pollinated by wind and insects are more susceptible to cross-pollination than self-pollinating varieties. Many wind- and insect-pollinated crops are major commercial commodities; corn, sugar beets, apples and cotton are a few examples. But contamination can occur in many ways: the seeds may be impure, machines can contaminate seeds during sowing or crop harvesting, or seeds can cross-fertilize and mix during transport, storage and processing.

The alfalfa study is only one of a growing number of cases around the world where non-GE crops are contaminated by GE strains, affecting their legitimacy in the market and their profitability overseas. While GMO labeling remains optional in America, it is required by law in many countries that import American products, including Japan, China, and the entire European Union. When crops raised using

"Healthy Soil for Healthy Plants for Healthy People"

Presented by the Bionutrient Food Association, with expert farmer Dan Kittredge.

February 8-9, 2016. Kripalu Center, Stockbridge, MA.

Find out more about the conference here.

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A Conference on Biodiversity

When: Saturday, April 30, 2016, 9 a.m. - 5 p.m.

Where: Geological Lecture Hall, Harvard Museum of Natural History

Biodiversity is the foundation of a healthy ecosystem. In this conference, we will review the history, processes and restoration of biodiversity, emphasizing how humans can apply what we've learned from different cultural and species' perspectives, advocating for the regeneration of healthy, biodiverse landscapes that draw down atmospheric carbon, restore water cycles and reverse global warming.

More details to follow!

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organic and traditional methods are contaminated by GE pollen, their growers are at risk of extreme economic consequences. Multiple shipments of U.S. alfalfa that tested positive for the Roundup Ready gene were rejected by China in 2014, resulting in millions of dollars in losses for U.S. alfalfa exporters.

The USDA acknowledged the severity of this issue with a 2012 report: *Enhancing Coexistence: A Report of the AC21 to the Secretary of Agriculture*. It provides recommendations to increase communication between neighboring farms, along with strategies for supplying appropriate education about coexistence, and potential compensation mechanisms to address economic losses from cross-pollination. One major criticism of the USDA's coexistence approach is that it continues to leave the responsibility for contamination protection on the shoulders of organic and non-GE farmers and places no liability on the GE industry. Advice that encourages non-GE farmers to take out insurance to cover the damage caused by crop-contamination is not balanced with GE farm contamination prevention measures.

Until the USDA requires the GE industry to institute proven measures to prevent GE contamination, what are non-GE farmers to do? Many are calling for a nationwide moratorium on all new approvals of GE crops. Without appropriate policies in place to protect non-GE farmers from contamination damage, "coexistence" is hardly the way to ensure harmonious neighbor-farmer relations.

Jacqueline Sussman

International Coalition Aims to Curb Food Waste

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About BLC

Our mission at Biodiversity for a Livable Climate is to mobilize the biosphere to restore ecosystems and reverse climate change. Our primary project is to re-direct the mainstream climate conversation from an almost exclusive concern with atmospheric carbon to encompass the entire carbon and water cycles and the regenerative role of biology.

Learn more about our ongoing projects, upcoming events and find additional information and resources at bio4climate.org.

Edible food in a landfill. Photo via Ecomena.org

As population growth intensifies the conversation about food scarcity, the mainstream media is paying attention to an issue that has long been ignored: food waste. Worldwide, approximately a third of food winds up in the garbage; that figure is up to 40 percent in the United States. These statistics signal that something is surely wrong in the food system.

Food that is produced and discarded uneaten represents nearly 30 percent of the world's agricultural output and, if consumed, could feed the entire planet's population for two months. Food waste is a significant contributor to climate change, accounting for 7% of annual global greenhouse gas (GHG) emissions. If food wastage were a country it would be the third-highest emitter in the world. Major international economic players are finally taking note of this global problem and making plans to reduce it.

On January 21, at the World Economic Forum in Davos, Switzerland, two initiatives were announced that aim to reduce food loss and waste along the supply chain. Champions 12.3 is named after the U.N.'s Sustainable Development Goal (SDG) 12.3, which encourages countries to cut global food waste in half by 2030. The initiative is run by a coalition of 30 heavyweights, including the European Commissioner for Health and Food Safety, the International President of the World Wildlife Fund and the CEO of Nestlé.

The second initiative, called YieldWise, is focused on combating post-harvest food spoilage in sub-Saharan Africa. This $130 million project of the Rockefeller Foundation (also part of the Champions 12.3 coalition) aims to take advantage of four "opportunities." It will fix broken links in the supply chains from African farms to markets, help farmers access technologies and solutions to curb preventable crop loss, invest in financing models and

technology innovations that drive mutual economic growth, and engage global businesses to account for the food lost and wasted in their supply chains. While YieldWise focuses its efforts primarily in Africa, it also seeks ways to reduce and prevent food waste in the U.S. and Europe.

While the two Davos initiatives are not a panacea that will immediately end food waste around the world, they are a step forward on the path to reducing the amount of uneaten food that decomposes in our landfills and one more link in the all-encompassing effort to reduce GHG emissions worldwide.