Biotech rice and biofuelâ€TMs biofuel

Authors: Katherine Myers Mr. Robert Mclean Erica Boyd Kevin Barr Jessica Rivera

Published Date: 03-30-2016

California State University-Long Beach

School of Global Science, Technology, and Society

Do not quit your day job. Photograph by Shutterstock.

A leaked extract of a half-page supplement attached to the Japanese edition of Nature Conservation Science [JP] apparently points to the widespread use of genetically modified (GM) soy and canola as biofuel feedstock. Such used crop feedstock has its various drawbacks, for example, increasing carbon emissions from deforestation. Still, GM crops can help to reduce food prices around the world.

The supplement tells the story of Yoshiyuki Kawazu, an organic farmer in Fukuoka, Japan, who helped to develop "Monsanto's GM oilseed rape†to replace white rapeseed as a bioremediation aid. The 60-year-old was invited to attend the company's annual meeting, and was eventually compensated for every grain of alfalfa he produced.

The excerpt is prominently featured on an article on the Nature article, and this is used as an example of how participants can profit from the overproduction of GM foods. That is, other participants can "order alfalfa fiber directly from Japan, and meet demand generated by a massive expansion of rice-derived energy crops.†Such demand, and price fluctuations, are of course caused by the rapid growth of biofuel production, and there is no economic reason to expect they will slow.

Biofuel production causes destruction of the environment, damages natural ecosystems and can cause biofuels to compete with food production, as noted in the Forest People Association $\hat{a} \in \mathbb{R}^{n}$ Nippon $\hat{a} \in \mathbb{R}^{n}$ Raised by Geoengineering In Real Life. China has suffered an economic and environmental failure with the growth of corn silage for biofuel production, since exports can become more competitive and cause food prices to skyrocket.

Era of GM crops

According to the packet insert, the value of Aquaculture Organics and Collagen Seeds – A Pharmacopoeia – which contain a Japanese GMO (BTE) type of yam and stinging nettle, respectively, is around 15.1 billion yen. When contacted for comment, a company official told the Japan Times: "I have not seen any item like this.†He added that he was not aware of its nature.

The Nature Security group, however, explains the significance of such a document. $\hat{a} \in A$ s the Japanese market for feedstock soy beans and canola crops gradually expand over the coming years, the development of GM soy and canola crops is expected to expand. Once the companies have advanced knowledge of the cultivation of genetically modified rice and corn for biofuel production, they will have reason to develop glyphosate-resistant corn. That is, when the development of GM biotech rice and corn increases, its fate could be determined by the market. $\hat{a} \in A$ s the Japanese market for feedstock soy beans and canola crops is expected to expand. Once the companies have advanced knowledge of the cultivation of genetically modified rice and corn for biofuel production, they will have reason to develop glyphosate-resistant corn. That is, when the development of GM biotech rice and corn increases, its fate could be determined by the market.

Natural materials

The world cannot continue to rely on unsustainable food production methods, and other development of forests and grazing lands, which will inevitably result in severe erosion. More sustainable sources of growing food require innovative new policies that preserve, rather than destroy, the world's natural environment. Furthermore, such policies need to be developed not only for agriculture, but also for forestry.

As the security and sustainability guarantee markets are developed, and therefore users of biofuel/bioremediation feedstock grow, and in order to avoid the ups and downs of the market, sustainable biofuel production and management policies can be gradually implemented.

In that light, the launch of an unprecedented policy effort to ensure biological diversity in cyberspace can provide biological precursors to biofuel crops. This ongoing effort to develop a genetic cross-breeding industry in cyberspace can be the beginning of increasing the scientific understanding of the cultivation of GMO plants, and eventually, in an era of GM crops, the research of the extensive biological information and new technologies is a possibility.



A Train Traveling Down Tracks Next To A Forest