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SPECIAL SECTION

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Biotech crop debate continues, hampering aid

By Jean Gossman

The polarized scientific and political debate — many years old — over genetically modified (GM) crops is now preventing American GM crops from feeding the desperately hungry in Southern Africa.

The European Union (EU) has imposed a de facto moratorium on new genetically engineered foods in response to low public confidence in Europe. That in turn has influenced famine-stricken African nations to refuse American agricultural products that contain genetically modified corn.

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Sen. Chuck Grassley (R-Iowa): "Scaremongers have propagated misinformation regarding biotechnology."

Some observers say that those countries are doing so for fear that EU nations will not purchase African exports if American GM products are accepted. Approximately half of Southern African nations' agricultural exports are sold to European Union members.

Dr. John Kilama, president of the Global Bioscience Development Institute, testified before the House Agriculture Committee in March: "Africans are concerned that Europe will retaliate against African exports if Africans accept genetically modified organisms from the United States. ... African farmers are concerned that if they are no longer able to certify that their foods are GM-free, they will lose their share in the European market."

Currently, Zambia refuses U.S. GM food aid and Zimbabwe, Malawi and Mozambique accept U.S. corn shipments only if the corn is milled before distribution.

The World Health Organization (WHO) has said that "in the current crisis, governments of countries in Southern Africa must consider carefully the severe and immediate consequences of limiting the food aid that is made available for the millions of people desperately in need."

Genetic engineering involves changing the DNA structure — the genetic blueprint — of living things. Although crops have been hybridized, or crossbred, for hundreds of years, it is now possible to not only change DNA structure within organisms, but also to transfer DNA from one organism to another.

GM crops are developed to produce specific outcomes. One oft-cited example is putting fish DNA into tomatoes. Flounder are very resistant to cold, and some believe genetically engineering tomatoes with this trait could help them fight frost. Other targeted results include resistance to disease and insects, greater tolerance of herbicides, enhanced nutritional value, improved taste and longer shelf life, among others.

An additional aspect of GM crop production is known as "pharming" or "biopharming" — development of crops to produce proteins used in pharmaceuticals at lower cost and greater volume, or to produce vaccines that could be eaten rather than injected. But there are concerns that such crops might inadvertently enter the food supply, posing a possible danger to public health and forcing costly recalls.

In 2002, a biotechnology company, ProdiGene, Inc., of College Station, Texas, allowed corn engineered for pharmaceutical benefits to intermingle with food crops, but discovered it before the food was eaten. In March, the Department of Agriculture issued new rules that bar land used for biopharming from being planted with a food crop the next year.

Alleviation of world hunger has long been a goal of the GM movement. The National Academy of Sciences, the Organization for Economic Cooperation and Development, the United Nations Food and

Agriculture Organization and the WHO have said that there is no evidence of harm or unusual risk associated with GM crops.

EU countries require labeling of GM products, and there is vigorous popular opposition in Europe to GM foods. Although U.S. agricultural interests support lifting the EU moratorium, they do not want to see it replaced with labeling requirements or product traceability guidelines in this country.

Over 130 countries, including African nations but not the United States, have signed the United Nations-initiated 2000 Cartagena Protocol on Biosafety (the Protocol). The unratified treaty, intended to allow countries to assess adverse impact on GM crops, addresses the moving of living GM organisms across boundaries. It covers most GM products, except those used for human pharmaceuticals.

The Protocol's Advanced Informed Agreements provision requires labeling and documentation, while the Precautionary Principle states that nations concerned about potential environmental damage may block GM products — even without scientific certainty.

Although the Precautionary Principle was intended to protect health and the environment, many in the United States contend that countries are using it as a trade barrier. At the Agriculture Committee hearing, Speaker Dennis Hastert (R-Ill.) stated "the current EU moratorium on genetically modified products has translated into an annual loss of over $300 million in corn exports for U.S. farmers. ...[This] could be disastrous for U.S. farmers in terms of competitiveness and the ability to provide food for the world's population."

Sen. Chuck Grassley (R-Iowa) raises GM corn and soybeans on his farm. In a March 5 speech to the Congressional Economic Leadership Institute, Grassley said, "Scaremongers have propagated misinformation regarding biotechnology. ... If these products were unhealthy, we wouldn't consume them in the United States. If they harmed the environment, we wouldn't be growing them in Iowa."