



Anti-Hunger Legislation Should Be Technology Neutral

Proposed Global Food Security Act Appears to Require Research on Genetically Engineered Crops

The Union of Concerned Scientists (UCS) calls on Congress to make recently proposed agricultural research and anti-hunger legislation technology neutral by stripping a provision in the Senate bill that appears to mandate research employing genetic engineering. Such a mandate—or even an implied preference for genetic engineering technology—is inappropriate and unnecessary.

The Global Food Security Act of 2009 (S. 384) would authorize new U.S. foreign assistance funds to “[promote] food security, agriculture productivity, rural development, poverty and malnutrition alleviation, and environmental sustainability by engaging the expertise of United States institutions of higher education in collaboration with public and private institutions in developing countries.”

The bill, passed by the Senate Foreign Relations Committee on March 31, would authorize annual appropriations for the U.S. Agency for International Development (USAID) totaling \$7.75 billion over the period FY10–FY14). It would establish a collaborative program of partnerships for agricultural research involving U.S. land-grant colleges, the Consultative Group on International Agricultural Research, and others. The bill also would require the president to designate a Special Coordinator for Food Security in the White House. Overall, S. 384 would provide a much-needed infusion of research and technical assistance to developing countries that continue to struggle to feed themselves adequately.

UCS strongly supports the overall thrust of S. 384, which would provide additional agricultural and rural development assistance to developing countries. But we believe that to be most effective in advancing developing country agriculture, as well as culturally sensitive, such assistance should avoid singling out any particular technology. Research institutions in recipient countries should be free to choose the research and technologies that they deem most appropriate to their own particular needs and circumstances.

It is therefore troubling that the proposed legislation contains a provision that seems to favor, if not outright mandate, one particular technology—genetic engineering. Specifically, the bill would amend the Foreign Assistance Act of 1961 to read as follows:

Agricultural research carried out under this Act shall...include research on biotechnological advances appropriate to local ecological conditions, including genetically modified technology. (emphasis added)

It is difficult to know what the terms “biotechnological” and “genetically modified” mean because they are not defined in the proposed legislation and have no universally accepted definitions. The terms, however, generally apply to techniques of gene splicing—also known as genetic

engineering—as distinguished from modification of plants and animals through traditional breeding.

Also unclear is how the USAID would implement this provision. The agency could, for example, read it to require genetic engineering in each research project carried out, or only to require that the technology be represented somewhere within the entire portfolio of projects.

But the interpretation of the provision is a secondary matter. The primary concern is that the legislation has singled out one technology, and by including it in the short list of features that research “shall” include, strongly implies a preference for that technology over others.

Foreign assistance legislation should not favor one technology over another, particularly not a controversial technology like genetic engineering. Many countries have reasonable reservations about genetic engineering based on lack of appropriate infrastructure to evaluate and regulate it, concerns about market impacts, or simply the availability of cheaper, more attractive alternatives. By so strongly favoring genetic engineering, Congress may force countries to choose between accepting a technology they do not want and forgoing needed research and technical assistance, a choice that undermines the message of global cooperation and mutual respect that the United States is seeking to convey.

A new UCS report, *Failure to Yield* (www.ucsusa.org/FailureToYield), underscores the desirability of offering countries choices beyond genetic engineering. The report evaluated 20 years of U.S. crop data and concluded that genetic engineering, despite claims to the contrary, has so far failed to substantially increase the productivity of food and feed crops. By comparison, traditional breeding has steadily increased crop yields. Examples of traditionally bred crops of interest to developing countries include a new disease-resistant cassava variety that reportedly increases yield under drought 5- to 6-fold, drought-tolerant and disease-resistant pearl millet (an important native African crop), resilient high-yielding rice resulting from a cross between African and Asian rice, and rice now grown in Bangladesh that survives even after long submergence after monsoon rains. Modern genomic methods such as marker-assisted selection (MAS) may also hold promise. Furthermore, inexpensive ecologically based farming methods have doubled yields of some crops in Africa.

It simply does not make sense to mandate the inclusion of genetic engineering, a technology that has so far not proven very effective, when so many other desirable alternatives are available. Doing so may waste scarce resources and further stunt research investments into these productive technologies and methods.

The United States should support the development of a full suite of research tools for improving agriculture and food systems, including research in traditional breeding, advanced genomic techniques such as MAS, genetic engineering, traditional and modern farming methods, and infrastructure improvements. Recipient countries and research institutions ought to choose the approaches that work best for them. There is no need to single out any one option in this legislation.

To make the foreign assistance legislation technology neutral, the provision promoting biotechnological advances should be stripped from the Senate bill before it is introduced in the House.

Key Excerpts from the Global Food Security Act of 2009 (S. 384) and the Foreign Assistance Act of 1961

The Foreign Assistance Act of 1961 currently states:

Agricultural research carried out under this Act shall

(1) take account of the special needs of small farmers in the determination of research priorities,

(2) include research on the interrelationships among technology, institutions, and economic, social, environmental, and cultural factors affecting small-farm agriculture, and

(3) make extensive use of field testing to adapt basic research to local conditions. Special emphasis shall be placed on disseminating research results to the farms on which they can be put to use, and especially on institutional and other arrangements needed to assure that small farmers have effective access to both new and existing improved technology.

Sec. 202 of the Global Security Act of 2009 (S. 384) would amend Section 103A the Foreign Security Act to add the following provision:

(4) include research on biotechnological advances appropriate to local ecological conditions, including genetically modified technology. (emphasis added)

Although the implementation of the new provision is unclear, a reading of other sections of S. 384 suggests that the scope of this added provision could be broad, extending not only to U.S. land grant universities and other domestic research institutions and agencies, but also to universities and institutions carrying out agricultural research under the legislation in recipient countries. For example, the stated purpose of Title III--University Partnerships for Agriculture establishes collaborative partnerships between U.S. institutions and those in developing countries as follows:

...to authorize United States assistance that promotes food security, agriculture productivity, rural development, poverty and malnutrition alleviation, and environmental sustainability by engaging the expertise of United States institutions of higher education in collaboration with public and private institutions in developing countries. (emphasis added)

Sec. 297 of that title, quoted below, specifically defines the term “public and private partners of universities” to include institutions abroad. It reads:

...entities that have cooperative or contractual agreements with universities, which may include formal or informal associations of universities, other education institutions, United States Government and State agencies, private voluntary organizations, nongovernmental organizations, firms operated for profit, nonprofit organizations, multinational banks, and, as designated by the Administrator, any organizations, institutions, or agencies incorporated in foreign countries. (emphasis added)

And Sec. 298 specifies that these partnerships are to be the recipients of research assistance. The Section authorizes the president to:

...provide assistance on such terms and conditions as he may determine to implement program components through United States land-grant universities, other eligible universities, and public and private partners of universities in the United States and other countries... (emphasis added)