GENERAS: Students Launch a New Public Resource on Genetic Engineering and Need your Help

One of the biggest challenges of accurately communicating scientific information about a controversial topic is making that information easily available and accessible to the public. In the area of genetic engineering in agriculture, the public perception is that it lacks independent research on the risks, yet the scientific literature is replete with studies addressing those very questions. A small group of blogging scientists hopes to change that with a new web resource, but they need some help.

The plant genetics group blog, Biofortified, founded in 2008 by two graduate students, Karl Haro von Mogel and Anastasia Bodnar, hopes to bridge the gap. They have just launched a database called the GENetic Engineering Risk Atlas, or GENERA for short. Each entry in the atlas will include meta-information such as funding type, crop studied, where it was conducted, and the source of funding as well as an expert summary of the study itself. The database will be useful for consumers who wish to learn more, for NGOs and government regulatory organizations, and for scientists.

So far, Biofortified has a list of three hundred studies that need to be entered into the database. While more studies continue to be published on a regular basis, the first task is to get the current literature entered into GENERA. “With so many studies, it would take far too long for two people to catalogue them all,” said Bodnar. “We’ll need some help.”

“I programmed the background of GENERA to make it really easy to use,” said Haro von Mogel. “All it takes is filling out a simple form with the abstract, citation, crop, etc, and the atlas does the rest.” The scientist bloggers are counting on the success of community annotation projects and wiki-based resources to help populate the database.
Interested scientists can register for the blog at www.biofortified.org and contact its editors to be given access to create entries in the atlas. Anyone can make a simple entry, and scientists familiar with the language in the studies can also help out by writing a summary of the study. Several examples have already been entered into the atlas, with and without the optional summary.

In the future, GENERA will be useful for a variety of purposes. Studies can be searched on the basis of crop and study type, location, findings, funding, and publication status. Non-peer-reviewed studies will also eventually be included, and the site can be used to summarize all of the studies in the atlas. Scientists may find it useful in their own research. “We’re thinking about using it to write a review article someday,” said Bodnar.

“Getting this information more accessible to the public will be really beneficial for the public discussion of GE crops,” said Haro von Mogel. “People have this perception that there is no independent research done on these new traits, while about a third of the three hundred studies on our list are independently funded. People need to know about them.”

Haro von Mogel and Bodnar founded Biofortified in 2008 when they recognized the lack of science-based information about genetic engineering on the web and the have worked to create a place where scientists and non-scientists can discuss and learn from each other. The blog currently features posts written by other graduate students and professors in the field.

Biofortified is independently run on a volunteer basis, and is not supported by any funding from any companies or government entities. While site hosting costs were initially footed by the founding members, these costs are now covered by a Changemakers grant awarded to Biofortified for winning the Ashoka Changemakers GMO Risk or Rescue contest. (http://www.biofortified.org/2009/11/we-won/)

Links:
The GENERA homepage: http://www.biofortified.org/genera/
GENERA Tutorial: http://www.biofortified.org/genera/genera-tutorial/
An example entry with a summary of the study: http://www.biofortified.org/genera/entries/long-term-cow-feeding-study-with-bt-corn/
An example entry without a summary: http://www.biofortified.org/genera/entries/maize-gene-expression-and-nitrogen-fertilization/
For more information about Biofortified: http://www.biofortified.org/about/
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