

Will this development spur demand for non-GMO crops?

[Posted 2014-01-14](#)

For the first time, a nationally famous TV personality is about to broadcast a hard-hitting documentary series on genetically engineered grains and their related chemicals — *including concerns about their health impacts*.

The interviews will include American farmers and scientists. It will launch in mid-February.

The TV star's primary audience: 1.4 billion Chinese. **His name:** Cui Yongyuan, star of the show *Tell it to little Cui*. It's broadcast on China's main TV service, CCTV, plus satellite and internet. Cui is also a TV favorite of overseas Chinese, including those in the United States.

The TV series is sure to intensify the debate among Chinese on the safety of genetically modified crops and related chemicals, especially glyphosate herbicide. It's likely to go viral on China's internet, just before the Chinese People's Congress March 6.

China's government leaders are placing new emphasis on their country's ag productivity and safety. A new policy statement includes this goal: "If China wants to be strong, agriculture must be strong. If China wants to be beautiful, the countryside must be beautiful. If China wants to get rich, the farmers must get rich."

Ag leaders also acknowledge consumer concerns over GMO safety -- particularly with imported GMO soybeans. On Jan. 22, a leading ag official commented that China's government is responsible for assuring consumers of the safety of GMO foods. His observations were quoted in the news service Xinhua.

During December, Cui Yongyuan interviewed several Americans keenly aware of GMO concerns, such as Dr. Don Huber, Emeritus Professor of Plant Pathology at Purdue University. Mr. Cui also recorded footage of interviews with crop consultants Bob Streit of Boone, IA and Howard Vlieger of Maurice, IA. He also interviewed farmers who endorse transgenic crops. This article contains summaries of what they told the Chinese via Mr. Cui's program.

Mr. Cui also interviewed mothers of children who have auto-immune health concerns. The mothers told him that when they removed GMO ingredients from the diets of children, their health improved.

Officials at the U.S. Department of Agriculture and Food and Drug Administration refused interviews with Cui. Possibly, U.S. officials sensed they'd be asked to show long-term animal and human health studies proving the safety of GMO crops. An earlier delegation of U.S. consultants asked for such studies a year ago, receiving only blank stares from USDA researchers. Only short-term trials exist.

USDA had reason to expect hard questions from Mr. Cui. A coordinator of the interview expedition was Mr. Chen I-wan, a senior advisor to China's Disaster Prevention Association. Known as "Chenny" by his American friends, Mr. Chen has worked several years compiling evidence of impacts from GMO soybeans, corn and rice across China.

Mr. Chen wrote a detailed research paper in 2011, urging Chinese lawmakers and ag administrators to conduct thorough evaluations of the ecological and health consequences of GMOs. China's national policy on GMOs is similar to America's: Broad encouragement of new, widely used transgenic crops in all sectors of agriculture. China's current 5-year plan allocates \$4.55 billion to transgenic research, but less than 1% of that amount to research using conventional crop breeding.

The Chinese government has another similarity to ours: It has not conducted extensive, long-term evaluations of the health consequences of GMOs and the residues of related chemicals like glyphosate carried into the food chain. Mr. Chen's carefully documented report concludes: "Providing unconditional massive funding and absolute support to the promotion of GMO technology is a fatal strategic mistake."

When Cui Yongyuan and his research team returned to China in late December, reporters and researchers swarmed them on arrival, asking what they learned about America's attitude toward GMO technology and its safety.

China imported about 63.4 million metric tons of soybeans from all sources in 2013. Of that total, 16.5 million metric tons came from the United States. Most of the U.S. soybeans were GMO, since about 94% of soybean acreage in the U.S. is GMO. But Mr. Chen points out that the Chinese government has set no legal limit on the levels of glyphosate herbicide residue in imported soybeans.

Norwegian food safety scientists who recently analyzed 31 Iowa soybean samples, in which 10 samples were GMO, found the GMO samples contained an average of 3.26 parts per million of glyphosate and 5.74 ppm of AMPA (a breakdown derivative of glyphosate). The 11 samples of organically grown soybeans they tested showed no detectable glyphosate. (Download a PDF copy of the accepted manuscript [here](#))

Many Chinese farmers and consumers are anxious that something is in their food and feedstuffs have caused worsening health disruptions during the past decade. Three examples:

1. GMO cotton with glyphosate tolerance first looked like a breakthrough to reduce Chinese farmers' herbicide and pesticide costs. But after three seasons with GMO seed, farmers saw weed and pest diversity rise the next four seasons — along with chemical costs. Also, yields failed to improve on a sustained basis. Chinese growers who tried GMO cotton saw their profits deteriorate. Today, GMO cotton with glyphosate tolerance is not widely grown in China.

2. Farmers in Shaanxi and Jilin provinces who were feeding hogs and poultry a specific corn hybrid, XY335 from Pioneer, a DuPont subsidiary, encountered severe reproductive problems beginning in 2010. Litter size declined. Thousands of newborn pigs lost vigor; many died. At first, China's ag ministry brushed off any disease link with transgenic corn, claiming that XY335 was non-GMO. Later, China's Environment Ministry reported finding the cauliflower mosaic virus (CaMV) promoter sequence in XY335. That signaled that the widely popular hybrid was genetically modified.

The GMO/health controversy is rippling through the Chinese countryside and ag ministry with growing intensity. Internet social networks throughout China are also opening new channels of farmer-to-farmer information sharing which bypass official gatekeepers. Just one social media exchange, Sina Weibo, has over 600 million registered users who send more than 60 million messages a day. There are four other major social media exchanges. Altogether, there are more than a billion active social media accounts among China's 1.4 billion citizens. Many sign up on several exchanges.

3. Dr. Don Huber says: "It has just become public information in China that Chinese scientists at the Inspections and Quarantine Bureau have isolated what appears to be the suspect abortogenic agent in soybeans imported from America. This organism was first identified by veterinarians in the United States."

In January 2011, Dr. Huber sent a confidential letter to Ag Secretary Vilsack warning of this potential pathogen. His letter was leaked to the public, causing widening concern over this suspect agent.

Shortly after the letter was leaked, Dr. Huber was contacted by Chinese scientists. Mr. Cui followed up those questions during his interview; Dr. Huber's comments are summarized below. (Chinese ag officials also invited Dr. Huber to China for two scientific conferences on ag biotechnology and related nutrition and health issues. A third conference is scheduled for 2014.)

Anxiety about GMOs among a rising number of Chinese citizens might partially explain Chinese importers' rejection of U.S. corn carrying a GMO trait developed by Syngenta, MIR 162, not yet approved by China. China's rejections of U.S. cargoes spread to distiller's dried grains (DDGs) testing positive for the trait. This dropped DDG prices by \$30 per ton, at least temporarily.

Cui Yongyuan found support for GMO crops during interviews with farmers representing the U.S. Soybean Export Council, an industry organization representing soybean growers and export firms. An excerpt from a news report posted on the USSEC site Dec. 16, 2013:

"Former United Soybean Board (USB) Director Sharon Covert, American Soybean Board (ASA) Vice President Ron Moore and ASA Director and chair of the ISA marketing committee, Ron Kindred, sat down with Chinese television personality Cui Yongyuan to share their views on the safety of biotech crops in the U.S. and the confidence that U.S. farmers have in the safety and benefits of GMOs.

"Mr. Cui also met with USSEC Chairman Randy Mann; the staff of the National Soybean Research Laboratory (NSRL); and Dr. Mark Messina, a nutrition professor and internationally recognized expert on the health effects of soy. On December 13, soybean farmer Doug Harford hosted the documentary crew at his Mazon, Illinois farm.

"These farmers welcomed the opportunity to speak about the benefits of biotechnology to the Chinese crew. Topics discussed included safety, sustainability, nutrition, higher yields, consumer choice, and environmental impact."

However, interviews with several other American sources knowledgeable on GMO-related health issues are likely to raise caution flags across China.

Chinese veterinarians are taking seriously a U.S. hog feeding study published in 2013 by Dr. Judy Carman, epidemiologist at Flinders University, Australia. The research was coordinated in Iowa by Howard Vlieger of Maurice, IA, founder of Verity Farms. The 23-week feeding trial with 168 weaned pigs, divided randomly into two groups, showed inflammation in stomachs of pigs fed GMO corn and soybean meal, but not in those fed non-GMO corn and soybean meal.

(Details on the project are online at <http://gmojudycarman.org>)

(The full paper published in the Journal of Organic Systems can be found at <http://www.organic-systems.org/journal/81/index.html>)

We asked Howard what he discussed on-camera for Cui Yongyuan's TV show. His response:

"I first shared the anecdotal information observed through the eyes and experiences of the farming customers I was privileged to work with prior to coordinating and conducting the hog feeding study with Dr. Carman. Then I summarized scientific findings of the study, such as:

"The GMO-fed females had abnormally heavy uterus weights — 25% heavier than females on non-GMO feed.

"Male hogs on the GMO rations showed a 400% increase in severe stomach inflammation; females a 220% increase versus non-GMO.

“For me, the most telling aspects of the study were the anecdotal findings, the kind a producer would notice. Pigs on GMO feed showed a significant change in behavior. We weighed the individual pigs every week. When the pigs were small we put them on the scale by hand. When they grew larger, we would run the pigs through a simple maze, after which they would step on the scale so we could record weights.

“Pigs eating non-GMO feed would go through the maze in significantly less time than the GMO-fed pigs. Some GMO-fed pigs could not navigate this simple maze. And, when we moved the growing pigs into a more confined environment, the GMO-fed pigs started fighting and biting one another — never exhibited the level of contentment the non-GMO fed pigs had.

“The non-GMO fed pigs also seemed to enjoy their time of running around after they had their turn of being weighed. They got to kick up their heels and play.

“How similar is this to what we are seeing in the young children and young adults in our country? Do we see behavior issues for the young children? Why do they “need” Ritalin and other medication to control their behavior in school?

“Do autism and ADHD disorders originate with a compromised immune system? This is one of the main issues I wanted to raise. Our experience relates to problems that Chinese hog producers are seeing.”



*Above: Mr. Chen I-wan, Howard Vlieger and Cui Yongyuan.
Their interpreter, Dr. Kun Chen of Cal Poly (Pomona) brightened everyone's day.*

Bob Streit of Boone, IA is one of the Midwest's most experienced and respected crop consultants. When Cui asked Bob what evidence he has seen linking GMO traits and chemicals to crop and livestock health, here are some of the points he made:

“Before GMO corn and soybeans dominated these crops, fungicides were seldom needed. Now they're commonly applied to corn and beans because fungal disease hits so frequently. One probable reason: Glyphosate exuded into the soil kills beneficial soil bacteria, shifting the soil microbial populations toward the opportunistic fungal side.

"In the last five years we have begun to see major diseases in corn that are now bacterial based. The level of aggressiveness and spread was surprisingly rapid and severe. Each season for the past several years, GMO cornfields have tended to die four to eight weeks early. Farmers tend to blame this on changes in hybrids, or weather. However, disease stress is probably the primary

cause. Healthy corn should have a mature ear in a light brown husk, on a green stalk that doesn't die until frost kills it.

"Glyphosate's weed-killing capability in the first 10 to 15 years led farmers to compete for larger acreages. It was management in a jug. But now, many weed species are increasingly resistant to glyphosate and other contact herbicides.

"Insects have developed resistance to some of the "insecticides" built into corn. The number one case is with western corn rootworm, which are eating into plants originally protected by different registered traits.

"Given good management, GMO crops typically show no yield benefits compared with the same isogenic lines which have no inserted traits.

"Some of my clients who feed their own hogs, beef cattle, dairy cattle and poultry recognized livestock health problems when feeding GMO crops. They've transitioned back to conventional corn and soybeans, largely avoiding the rising problems of poor reproduction and vulnerable immune systems. More clients are interested in making that shift, and weed control systems are available to do so."

Mr. Cui asked Streit if farm producer groups are realizing these problems. Streit's response: "Yes, but generally they're using their influence to keep these issues quiet. We have met with groups such as the state Corn Growers and a USDA group in Washington, D.C. Both ignored our observations and predictions, as well as ignoring our request in providing help to prevent the problems we accurately foresaw."

Bob added that China, as a major buyer of U.S. farm commodities, has immense power to encourage American farmers into producing what China wants to buy. His final observation: "It would be ironic if Chinese buyers of our commodities become the driving force that leads American farmers back to sound long-term crop and soil management — thus saving us from our own government policies."



Dr. Don Huber (left above) and Bob Streit, in front of an Iowa field of non-GMO corn which has reached black-layer maturity -- with leaves and stalks still green.

Mr. Cui also interviewed Dr. Don Huber, Emeritus Professor of Plant Pathology, Purdue University. Dr. Huber has presented dozens of detailed seminars worldwide in recent years, documenting the nutrition and health challenges linked with GMO crops and related chemistries, especially glyphosate. He has also served many years as a military advisor on biological warfare. To download a PDF of Dr. Huber's biographical information, [click here](#).

We asked Dr. Huber to summarize a few of the observations he made on camera for the Chinese audience. Here's a condensation of key points:

"My general observation for our Chinese friends was that I hope American producers can meet their needs in a cooperative manner. We both appreciate and need China as an export customer.

"I said I appreciated the Chinese willingness to report their Inspections and Quarantine Division's confirmed finding of a previously unknown abortogenic agent in soybeans imported from the United States. That raises health concerns not only for the Chinese, but for Americans and our other export customers.

"Their scientists concur that this protein-like agent is unlike any previous protein known to science. This is the same conclusion reached by a group of American scientists, and which I presented in a letter to USDA Secretary Vilsack in January 2011. In my followup background report of April 20, 2011, ([link to copy of letter](#)) I detailed reasons why this organism has serious health implications for livestock and humans, as well as crops. It appears to be intensified by GMO crops, and with glyphosate.

"This protein is visible only under an electron microscope. It contains no DNA or RNA, but it is self-replicating. Pathologists have isolated it from aborted fetal tissue, grown it and introduced it into healthy animals, where it produced lethality. It was then found again in the infected fetal tissue, and isolated. This research meets all criteria of "Koch's Postulates," a rigorous scientific standard for establishing the cause of a disease.

"Thus it's unquestionably a crop-borne agent which causes infertility and miscarriage in cattle, hogs, sheep, poultry, other livestock such as horses — and also humans. If USDA risk management officials have followed through and contacted any of the U.S. pathologists and other scientists involved in this research, I haven't heard about it.

"Chinese scientists are sponsoring a symposium on this and other GMO health issues in July 2014. I've been invited, along with others looking to assure nutrition and safety of crops. As Americans, we want to be assured that we're exporting a quality crop that our farmers can be proud of.

"I have some really serious concerns for the health of Americans consuming GMO crops, as well as for the trust essential in export relationships. This concern with the health impact of transgenic crops and chemicals is also very strong among citizens of China and worldwide.

"Brazilian farmers are already promoting to Chinese buyers the availability of high quality non-GMO soybeans — at the same price as GMO beans. Columbia's government has plans to open about 10 million new irrigated acres for crop production; especially non-GMO soybeans. They're targeting China as a prime market.

"Our U.S. commitment needs to be that we'll provide the product, and the quality, which our customers want. It's better than threatening, "Buy our GMO crops, or we'll sue you before a World Trade Organization tribunal." However, threats have been our approach with Europe. No importing country will accept that approach if they have a choice. And it looks like our overseas customers will have more choices.

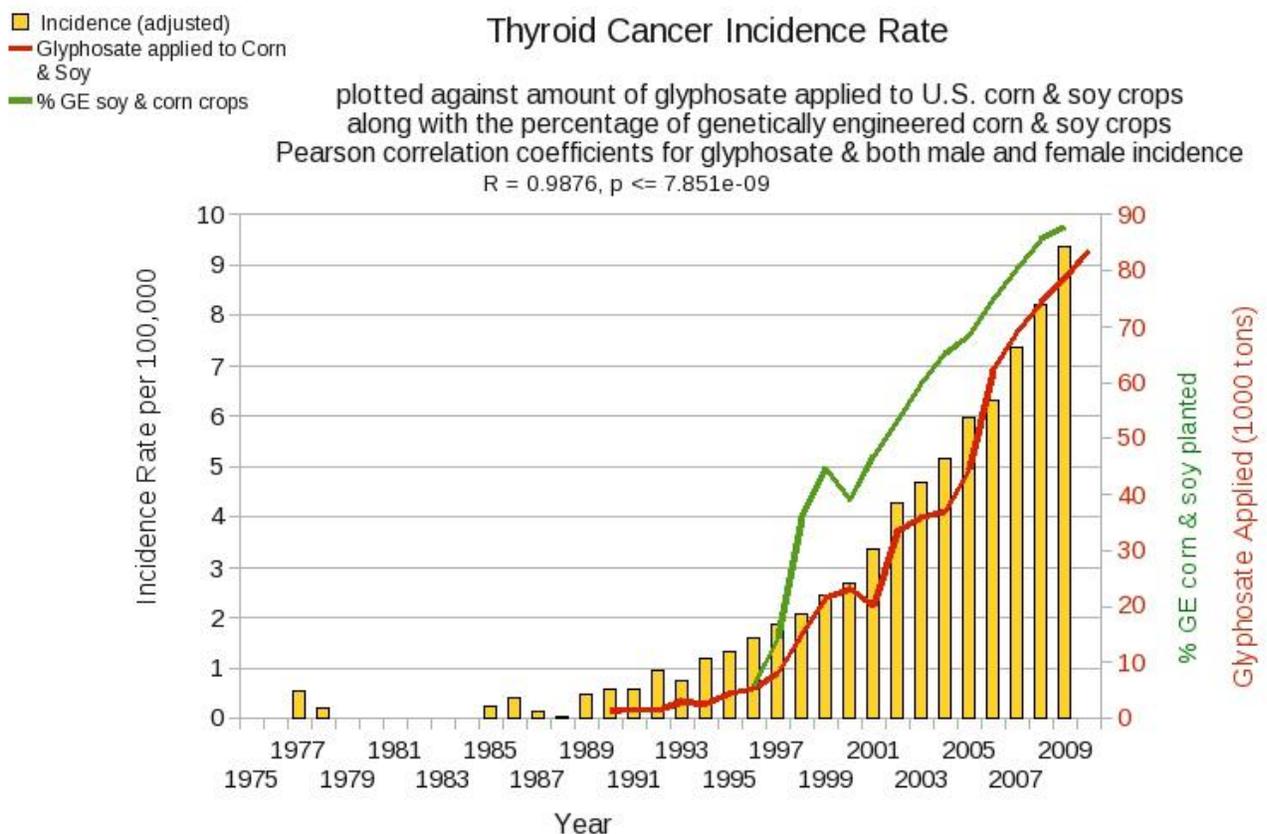
“In last year’s scientific symposium in China, a speaker from the U.S. Food and Drug Administration focused on assuring the Chinese our GMO products were safe. Two hours later, a speaker from the [Brazilian Association of Non Genetically Modified Grain Producers](#) was assuring Chinese buyers, on China’s public television, that they are ready to produce any quantity of non-GMO beans. And they stand ready to assure zero contamination.”

Dr. Huber reviewed and approved our summary of his comments above. As hundreds of farmers who've attended his seminars know, he's a scientist who relies on solid evidence.

Of course, most ag media writers maintain that there has been no evidence of health issues in the nearly 20 years that GMO crops and glyphosate have grown to dominate corn and soybean production. However, they're choosing to ignore data which dozens of other countries are very concerned about. There are dozens of concerned scientists and citizens who are reporting information which is flowing beyond the traditional media gatekeepers. Here are just a few examples:

1. **Dr. Nancy Swanson**, who writes on GMO and glyphosate issues for the Seattle Examiner. Here's a link to a sample [of her recent reports](#).

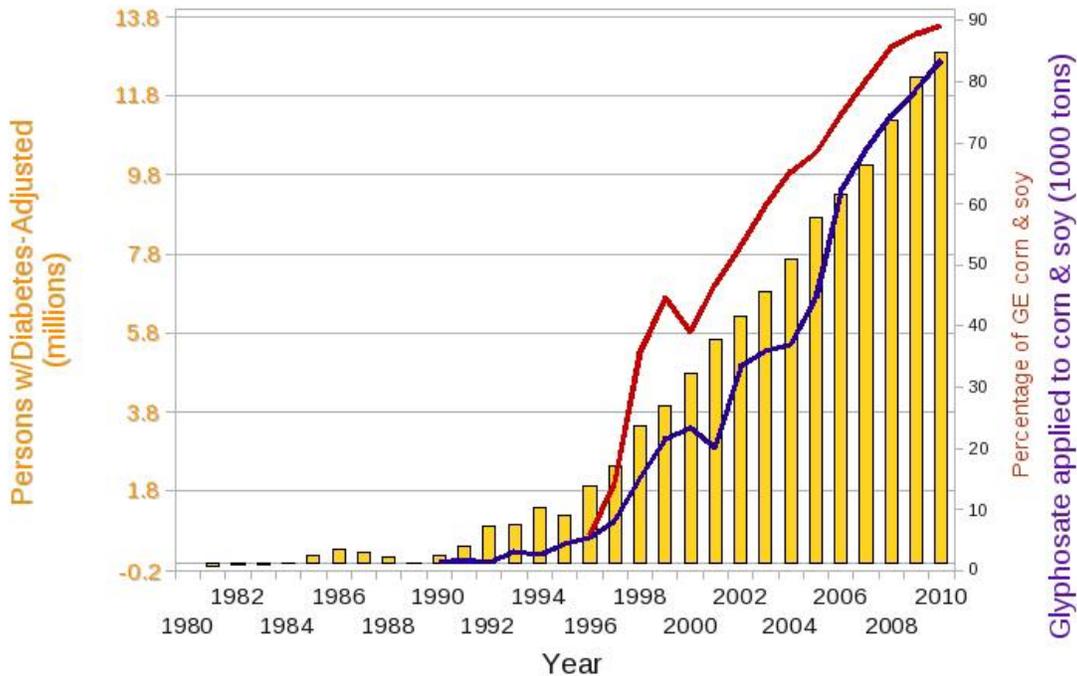
Dr. Swanson assembled charts of several trends in chronic diseases in the United States, and related them to the expansion of GMO crops and glyphosate. A correlation is not proof of a cause -- but trends like this should signal health officials to investigate what the causes are:



Number of People Diagnosed with Diabetes in U.S. (prevalence)

- Persons w/Diabetes (adjusted)
- % GE soy & corn crops
- Glyphosate applied to Corn & Soy

plotted against glyphosate applied to corn & soy crops along with percentage of GE corn & soy grown in U.S.
 Pearson's coefficient for glyphosate and prevalence
 $R=0.9836$



2. **Claire Robinson**, one of the managing editors of GM Watch, an independent organization that seeks to counter the enormous corporate political power and propaganda of the biotech industry and its supporters." To browse the GM Watch site, you could start [with this link](#).

3. **Anthony Samsel and Stephanie Seneff**, authors of a new study analyzing glyphosate's impact on bacteria in human and animal digestive systems. [Download the PDF report](#).

4. **Gilles-Eric Séralini**, leader of a three-year toxicology study of GMO grains and glyphosate, has more than one research study and report, as you can see by visiting the website gmoseralini.org and browsing the ongoing controversy. The latest round of this controversy is unearthing why the journal *Food and Chemical Toxicology* retracted the Séralini team's study. In the journal *Bioethics Forum*, [two authors reason](#) that the retraction appears to be the result of corporate bullying, not a scientific decision.

5. **A Russian scientific union** urges a moratorium on GMO crops pending thorough examination of health issues. [Link to report](#).

6. **For many years we've admired** Tom and Irene Frantzen of northeast Iowa for their innovative spirit as members of Practical Farmers of Iowa (which we also support). Now their son James has started a new local feed supply business, offering non-GMO feed to meet surging demand. We like to look at opportunities... and this is a dynamic opportunity. For an overview, visit this link at the [Organic & Non-GMO Report](#).

7. **Another longtime friend, Dr. Arden Andersen, is a medical doctor with an extensive ag background** and a post-doctorate in public health. He summarizes key findings about GMO and glyphosate impacts on health in a recently published "Food Plague Primer" which is available at the online bookstore of the ACRES magazine, Austin, TX. It's popping up around the web too, so

we've taken the liberty of linking to the PDF version of it [here as a download](#). Relevant to Dr. Huber's analysis above, Arden writes:

"What most people don't know is that Dr. Huber is also a retired Army Colonel who spent half his career at Ft. Detrick, Maryland working in the bio-threats arena for the Department of Defense while maintaining his "civilian" research and teaching duties at Purdue. This is a professional scientist with the highest standards, an impeccable reputation and a man who takes his oath to defend our country seriously, serious enough to tell the truth about glyphosate, academic research suppression and the threat it and genetically modified crops pose to the health and safety of all mankind. Part of his job

description at Ft. Detrick was and is to sound the warning whenever a biological threat against the U.S. or its allies was/is discovered. That he has done and is doing yet today."

8. For a perspective on GMO safety from the consumer standpoint, here's a link to a [recent analysis by Michael Hansen](#), senior staff scientist at the Consumers Union. Hansen has been watching the development of transgenic crops from the beginning, and he sees a nearby "tipping point" in public opinion just ahead.

9. A new glyphosate toxicity study soon to be printed in the International Journal of Toxicology by Chaufang, Coalova I and Molina MD indicates that the G formulations of glyphosate (those with adjuvants in the blend) are causing toxic effects on human cells which are not seen with only acid glyphosate. Link to study at the [National Institutes of Health](#). [Click here](#) to download the entire study as a PDF.

10. Our original report has been translated into Chinese, including the English overtitles, by Mr. Chen I-wan, a senior advisor to China's Disaster Prevention Association. Here's the link [to that version...](#) if you'd rather read it in Chinese.

Note that Chen I-Wan's version has a thread section which is drawing many comments from Chinese readers.

We encourage you to watch for further developments of this emerging trend. It indicates a substantial opportunity for growers who choose to manage non-GMO production of corn and soybeans. We expect those markets to grow!