

# International Service for the Acquisition of Agri-biotech Applications (ISAAA) – Global Status Reports on GM Crops



## **GM Freeze Briefing**

29 January 2009

### **1. What Is ISAAA?**

ISAAA claims<sup>i</sup> “to contribute to poverty alleviation, by increasing crop productivity and income generation, particularly for resource-poor farmers, and to bring about a safer environment and more sustainable agricultural development”. It aims “to contribute to poverty alleviation, by increasing crop productivity and income generation, particularly for resource-poor farmers, and to bring about a safer environment and more sustainable agricultural development”. It has centres in N America, Africa and Asia.

These claims need to be assessed against what has actually occurred in the development of GM crops in the last 12 years. The majority of GM crops being grown on large scale, highly mechanised farms in North and South America<sup>ii</sup> by a small number of farmers. ISAAA also say that their objectives include “building of partnerships between institutions in the South and the private sector in the North, and strengthening of South-South collaboration”. A glance at their financial supporters (see below) suggests that the interests of private sector links in the North are at the heart of ISAAA’s activities.

### **2. Who funds it?**

All the major biotech corporations including Monsanto, Bayer, Syngenta and Du Pont. The corporate backers also include Nestle.

See [www.isaaa.org/inbrief/donors/default.asp](http://www.isaaa.org/inbrief/donors/default.asp) for a full list. The list includes Lord Sainsbury’s charity the Gatsby Charitable Foundation and the UK’s Biotechnology and Biological Research Council (BBSRC).

### **3. Who runs it?**

Canadian Clive James (who authors the annual Global Status Report) is the Chair. Prior to ISAAA he was Deputy Director General at the International Maize and Wheat Improvement Center (CIMMYT) in Mexico, where he worked for GM proponent Norman Borlaug. The Global co-ordinator is Randy A Hautea, who is based at the International Rice Research Institute in The Philippines. Other board members include Paul S Teng, a former Monsanto employee who is a biotech academic, and Jennifer Thompson, a leading light in promoting GM crops in Africa.

See [www.isaaa.org/inbrief/structure/default.html](http://www.isaaa.org/inbrief/structure/default.html) for a full list of Directors.

### **4. What is the global status report and why is it published?**

The Global Status Report claims to be a compilation of GM crop cultivation to tell the world about its “consistent and substantial benefits” (see below). However, there are significant questions about the accuracy of the data they issue (see questions 5 to 9 below). It is published to generate publicity for GM crops and to give the impression that they are a success when their impact to date remains limited and many scientific, social and economic concerns remain to be answered. There is also much public opposition to their use and development.

The International Assessment of Agricultural Knowledge, Science and Technology (IAASTD) published in 2008 found no compelling evidence of the benefits of GM crops:

*“The application of modern biotechnology outside containment, such as the use of GM crops, is much more contentious. For example, data based on some years and some GM crops indicate highly variable 10-33% yield gains in some places and yield declines in others.”<sup>iii</sup>*

Promises of drought tolerant crops<sup>iv</sup>, salt tolerance<sup>v</sup>, nitrogen fixing crops and nutrient enhanced crops have not produced any commercial crops to date. Genetic engineering to produce these changes in plants has proved to be more complicated than the single gene transfers/insertions in the GM crops that are currently grown commercially, which are mainly herbicide tolerant, insect resistant, or a combination of both.

## **5. Where does the data come from?**

The sources of data used in the global status report are unclear. For instance, the on-line PowerPoint presentation of the 2007 Global Status Report cites the source as “Clive James 2007”. Aside from the US, very few governments record the area of GM and non-GM crops separately, so data are collected per crop, ie maize areas include GM and non-GM crops. Thus ISAAA must generally rely on industry data for seed sales to calculate how many hectares were planted. China poses more difficult problems because the seeds come from several public institutions and the 2007 figures also included poplar trees for the first time.

## **6. Are the ISAAA figures reliable?**

In some countries data may be reliable, but in the past few years ISAAA information has been challenged or found to be inaccurate, for example:

- In 2006 the Global Status Report claimed GM rice was being grown in Iran, which was challenged by the International Rice Research Institute.<sup>vi</sup> The 2007 report did not mention GM rice in Iran.
- In 2005, the area given for GM maize in The Philippines (where no official statistics were gathered) was also challenged.<sup>vii</sup>
- The 2005 data for GM cotton in South Africa (where no official statistics were gathered) were challenged<sup>viii</sup> because the actual area appeared to be 20 times less than ISAAA’s claimed 100,000 hectares.
- ISAAA’s handling of Government data on planting has been criticised for increasing US areas by 2-9%.<sup>ix</sup>
- GM Freeze analysed ISAAA figures for GM maize planting in the EU for 2007 compared with Monsanto’s figures in their post market monitoring report. We found that the ISAAA exaggerated the actual area by a factor of four.<sup>x</sup>

Other sources (for example the Natural Environment Research Council website<sup>xi</sup>) made claims that 25% of arable land was under GM crops. GM Freeze analysis found that the real figure was only 2.4% of the world’s farmland growing GM crops in 2007.<sup>xii</sup>

Overall independently verifying ISAAA data is impossible but it is advisable, based on the examples above, to treat all the data with caution as with any figures derived from largely industry sources.

## **7. How does a country become a GM nation?**

ISAAA appear to take any area (however small) to qualify as country growing GM crops. Thus even a field of GM crops grown as a publicity stunt could qualify.

## 8. What happens if GM countries stop growing GM crops?

In the past ISAAA have been keen to include new additions to the list of GM countries, however, they have been slow to chart any negative steps. For instance:

- on joining the EU, Romania ceased to grow GM soya. This went unrecorded by ISAAA.
- In 2008 no GM maize was legally grown in France following the suspension of the license for Mon810. In 2007, Monsanto reported<sup>xiii</sup> that France grew 22,135 Ha of Mon810 in 2007. Europabio (the EU Trade Body for the EU) has already published data on 2008 planting in the EU<sup>xiv</sup> in which they ignored the French ban and claimed a 21% increase in the area of GM maize in the EU despite their figures showing a decrease from the 2007 figure. How the ISAAA report for 2008 will deal with this reduction in EU area will be interesting.

## 9. Don't non-GM crops vastly outweigh GM cultivation worldwide?

Despite ISAAA's best efforts to massage the data to show GM crops in the best light, there is no escaping the fact that over 97% of land grows non-GM crops, showing that the world is not relying on, or even choosing, GM. There are no commercial GM varieties of wheat, barley, rice, potatoes, cassava, sorghum, millet or sweet potatoes. Aside from the USA where some GM papaya and squashes are grown, there is no commercial growing of GM vegetables or fruit. ISAAA reported that China grew GM papaya, tomatoes, sweet pepper and petunias, but then included these in a list of crops, which were being "field-tested".<sup>xv</sup>

Only in soya beans does GM dominate the world's total crop. The majority of these crops are used for animal feed and agrofuel production (bio diesel and ethanol), not to feed people, so a better comparison would be to the acreage of global pastureland, rather than that of food crop production.

## 10. What other problems are there with dependence on GM?

There are worrying trends in some countries where GM soya has become a huge export-lead business. In Paraguay, soya is now grown on around 85% of arable land – not a good example of sustainable farming practice. Strong resistance to GM crops arises from concerns about contamination in centres of biodiversity of native landraces, crops or wild relatives of crops (eg soya in China, rice in Thailand, potatoes in the Andes and maize in Mexico). Confirmation of contamination of Mexican landraces of maize came last year.<sup>xvi</sup>

Weed resistance is a growing problem in the USA and Argentina, where a number of weeds have developed resistant to Monsanto's Roundup. As a result, pesticide use on GM crops has increased<sup>xvii</sup> in the USA. Other farming problems include insect resistance, reduced nutrient uptake and harm to farmland biodiversity.<sup>xviii</sup>

There are also many unresolved questions about the health impacts of GM crops arising from the significant changes that occur when plants are genetically engineered, including new allergens and toxins and changes to nutritional composition of the crop.<sup>xix</sup>

There is a growing list of impacts associated with GM soya monocultures, especially in South America. These include exposure to pesticides sprayed from aircraft, poor nutrient small farmers losing their land to large landowners and companies and major reductions in rural employment.<sup>xx</sup>

---

<sup>i</sup> See [www.isaaa.org/inbrief/default.html](http://www.isaaa.org/inbrief/default.html)

<sup>ii</sup> See [www.gmfreeze.org/uploads/GM\\_crops\\_land\\_area\\_final.pdf](http://www.gmfreeze.org/uploads/GM_crops_land_area_final.pdf) and [www.gmfreeze.org/uploads/89D\\_yields\\_briefing%5B1%5D.pdf](http://www.gmfreeze.org/uploads/89D_yields_briefing%5B1%5D.pdf)

<sup>iii</sup> Page 14 of Executive Summary, see [www.agassessment.org/docs/SR\\_Exec\\_Sum\\_280508\\_English.pdf](http://www.agassessment.org/docs/SR_Exec_Sum_280508_English.pdf)

<sup>iv</sup> See [www.gmfreeze.org/uploads/drought\\_briefing\\_final.pdf](http://www.gmfreeze.org/uploads/drought_briefing_final.pdf)

<sup>v</sup> See [www.gmfreeze.org/uploads/saline\\_final.pdf](http://www.gmfreeze.org/uploads/saline_final.pdf)

---

<sup>vi</sup> Denying ISAAA report of commercialisation of GM rice in Iran, DS Brar of International Rice Research Institute (sic)(IRRI) said, "We have so far received no confirm reports on this issue." See [www.financialexpress.com/news/GM-rice-likely-to-make-trade-more-complex/180508/](http://www.financialexpress.com/news/GM-rice-likely-to-make-trade-more-complex/180508/)

<sup>vii</sup> In the Philippines, ISAAA claimed that more than 50,000 hectares were cultivated with GM corn. However, the Philippine government does not monitor the actual areas planted with GM corn, nor does it have a system to track the amount of GM corn seeds that have been sold to farmers. When ISAAA director Dr. Randy Hautea was asked about the source of these statistics, he replied that they came from the Department of Agriculture in the Philippines. However, the Philippine Bureau of Agricultural Statistics has no figures on the hectareage or number of farmers using GM corn, and an official from the government said that ISAAA claim was superfluous. From page 6, [www.foei.org/en/publications/pdfs/gm-crops-2006-full-report](http://www.foei.org/en/publications/pdfs/gm-crops-2006-full-report)

<sup>viii</sup> De Grassi A, 2003. Genetically Modified Crops and Sustainable Poverty Alleviation in Sub-Saharan Africa: An Assessment of Current Evidence. Third World Network Africa.

<sup>ix</sup> See [www.lobbywatch.org/archive2.asp?arcid=5343](http://www.lobbywatch.org/archive2.asp?arcid=5343)

<sup>x</sup> See [www.gmfreeze.org/page.asp?id=365&iType=](http://www.gmfreeze.org/page.asp?id=365&iType=)

<sup>xi</sup> NERC website June 2008 This has now been taken off the website, but not before the figure had been reported by journalists. For a copy of the original website claims contact GM Freeze or Friends of the Earth.

<sup>xii</sup> See [www.gmfreeze.org/uploads/GM\\_crops\\_land\\_area\\_final.pdf](http://www.gmfreeze.org/uploads/GM_crops_land_area_final.pdf)

<sup>xiii</sup> Monsanto, 2007, *Monitoring report MON 810 Cultivation*

<sup>xiv</sup> See [www.europabio.org/documents/2008%20Cultivation%20chart.pdf](http://www.europabio.org/documents/2008%20Cultivation%20chart.pdf)

<sup>xv</sup> See [www.isaaa.org/resources/publications/briefs/37/executivesummary/default.html](http://www.isaaa.org/resources/publications/briefs/37/executivesummary/default.html)

<sup>xvi</sup> See [www3.interscience.wiley.com/cgi-bin/fulltext/121577870/HTMLSTART?CRETRY=1&SRETRY=0](http://www3.interscience.wiley.com/cgi-bin/fulltext/121577870/HTMLSTART?CRETRY=1&SRETRY=0)

<sup>xvii</sup> Benbrook, CM. "Genetically Engineered Crops and Pesticide Use in the United States: The First Nine Years." *Biotech InfoNet*, Technical Paper Number 7, October 2004.

<sup>xviii</sup> See [www.gmfreeze.org/uploads/89D\\_yields\\_briefing%5B1%5D.pdf](http://www.gmfreeze.org/uploads/89D_yields_briefing%5B1%5D.pdf)

<sup>xix</sup> See [www.bangmfood.org/images/stories/gmthreat1.pdf](http://www.bangmfood.org/images/stories/gmthreat1.pdf)

<sup>xx</sup> See [www.econexus.info/pdf/ENx-Argentina-GE-Soya-Report-2005.pdf](http://www.econexus.info/pdf/ENx-Argentina-GE-Soya-Report-2005.pdf)