

**Att: Johannes Moller**

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**AN OPEN LETTER: RESPONSE TO AGRI SA's UNSUBSTANTIATED PUBLIC CLAIMS  
ABOUT THE BENEFITS OF GM MAIZE FOR SA'S AGRICULTURE**

8 October 2012

Dear Mr Moller

**RE: 'AgriSA backs gene-modified maize'**

The African Centre for Biosafety is a non-profit organisation, based in Johannesburg. We provide authoritative, credible, relevant and current information, research and policy analysis in issues pertaining to food and agriculture in South Africa, with special reference to the application of modern biotechnology in agriculture.

The ACB read with interest an article published in the Business Day (2<sup>nd</sup> October, 'AgriSA backs gene-modified maize'), in which you argue that the curtailment of cultivating GM maize in South Africa would lead to lower yields, higher maize prices, and an increase in the use of agricultural pesticides. You then further go on to claim that GM crops are less susceptible to pests and drought. We find these claims to be spurious, unsubstantiated and completely detached from the day to day realities of our agricultural system.

1. In response to your arguments that GM crops result in higher yields, we would urge you to look at findings of the joint World Bank-UN FAO's IAASTD report from 2008, the largest scientific assessment of its kind ever undertaken on agriculture. The IAASTD concluded that there was no credible evidence to support this often heard claim.<sup>1</sup> Despite over 15 years of

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commercial cultivation, no crop variety has been genetically modified to have a higher inherent yield potential. A similar conclusion was drawn by the Union of Concerned Scientists in the United States in 2009, who have pointed out that the lion's share of yield increases in US maize and soybean production since the introduction of GM varieties in the mid-1990s is attributable to advances in conventional plant breeding.<sup>2</sup>

2. In South Africa, in addition to improvements in plant breeding and general agricultural practices, it is worth noting that since the liberalisation of our agricultural sector the maize production area has shifted in a north easterly direction, towards areas of the country with a higher production potential. Any farmer worth his or her salt will attest to a multitude of factors influencing yield, including soil health, seed genetics, the availability of inputs (whether chemical or organic), pest management practices and climatic conditions. Thus, correlating an increase in GM seed adoption with increased yields does not stand up to scrutiny. In fact, the latest available data from the Crop Estimates Committee shows that the average yield for this year's maize crop is at its lowest level since 2007, despite a huge increase in adoption of GM maize in the interim.

3. It is even clearer that an increase in GM maize production has not resulted in any lowering of food prices in South Africa. According to the National Agricultural Marketing Council (NAMC), from July 2011 to July 2012 the average price of the cheapest maize meal available to consumers increased by 26%, significantly more than increases for white bread (8.01%), overall food and non-alcoholic beverage inflation (8.7%), and headline consumer price inflation (4.9%) over the same period.<sup>3</sup>

4. To state that stopping cultivation of GM crops will lead to an increase in pesticide use is an extra-ordinary claim to make, considering that 85% of the GM crops grown worldwide are engineered to be tolerant to chemical herbicides.<sup>4</sup> In the United States, independent research has revealed that the introduction of GM crops resulted in a net increased application of over 144,000 tons of pesticides from 1996 to 2009.<sup>5</sup> Brazil, now the world's second largest GM crops producer, passed its biosafety law in 2005. From 2006 to 2012 pesticide sales increased by a staggering 72%, with Roundup Ready soybeans now accounting for 48% of all pesticides consumed in Brazil.<sup>6</sup>

We appear to be aping these trends here in South Africa. Over half of our GM maize is now herbicide tolerant and domestic glyphosate use has rocketed accordingly, from 12 million litres in 2006, to 20 million litres at present! In addition, between 2007 and 2011 glyphosate imports increased by 177%. This is particularly disturbing in the case of South Africa, as it is clear that our food safety authorities do not have the capacity to adequately monitor pesticide residue levels in our food.<sup>7</sup>

5. Many farmers would take issue with your statement that GM crops are less susceptible to pests. The case of insect resistant (Bt) maize in South Africa is a case in point. Incidences of target insects developing resistance to Bt maize were first officially reported in 2006. When these cases were confirmed by the South African National Biodiversity Institute (SANBI) in early 2011,<sup>8</sup> industry was still sceptical. However, within the space of 12 months, officials from Monsanto no less were declaring the situation as 'potentially catastrophic.'<sup>9</sup>

6. Finally, there are no drought tolerant GM maize varieties grown in South Africa. A Monsanto variety was approved in the United States in December 2011, but is only in its first growing season. The only performance data produced during its testing phase in the United States showed that it would deliver a 6% yield increase in conditions of 'moderate drought'. A potential 6% increase in the growing area for which this variety is intended translates into an overall increase of 1% in US maize crop.<sup>10</sup> However, the US National Climatic Data Centre estimates that 39% of the US mainland was under conditions of 'severe drought' or higher at the end of August 2012.<sup>11</sup> The US Department of Agriculture has concluded that under these conditions, this particular variety is 'not expected to be of practical value'.<sup>12</sup> In light of this it would appear that statements about the efficacy of GM 'drought tolerant' maize are premature to say the least.

The African Centre for Biosafety welcomes the space for debate that the Seralini study has opened up. What we do not welcome are statements on modern biotechnology, such as those listed above, which are unsubstantiated and amount to little more than populist scare-mongering.

Regards,



Mariam Mayet, Director, African Centre for Biosafety.

**Supported by the following organisations in SA working with on issues pertaining to land and agrarian reform and food production:**

Tshintsha Amakhaya, representing 10 NGOs in land and agrarian reform i.e. Association for Rural Advancement (AFRA), Border Rural Committee (BRC), Farmer Support Group (FSG), Nkuzi, Legal Resources Centre (LRC), Southern Cape Land Committee (SCLC), Surplus People Project (SPP), Trust for Community Outreach (TCOE), Transkei Land Service Organisation (TRALSO) and Women on Farms Project.

Khanyisa (Port Elizabeth); Masifunde (Grahamstown); Zingisa (King Williams's Town); CALUSA (Cape, Transkei), Itireleng (Phalaborwa) Mawubuye Land Rights Forum; Makukhanye Rural Organisation; Rural People's Movement; Iliziwi Lama Fama; Siyazakha Farmers association; Mopani Small Farmers Union.

Abalimi Bezekhaya, Harvest of Hope and Farm & Garden National Trust, who together represent the interests of at least 3000 micro-farming families.

**Additionally supported by:**

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### Organisations:

1. Earthlife Africa, Johannesburg (Judith Taylor)
2. Moments International (Firdoze Bulbulia)
3. Engender (Bernadette Muthien)
4. Partners for the land and agricultural needs of traditional peoples (Plant-Larry and Cathy Halvey Goodwin)
5. RALLT (Elizabeth Bravo)
6. The GAIA Foundation
7. Earthfirst (Paula Osborne)
8. Disc Disciple Ministries
9. Earthlife Africa Ethekewini
10. Ekogaia Foundation (Glenn Ashton)
11. Tanzania Alliance for Biodiversity
12. Tanzania Organic Agriculture Movement
13. Washington Biotechnology Action Council
14. Oakland Institute (Anuradha Mittal)
15. Community Alliance for Global Justice (Heather Rule English)
16. Environment Rights Action, Friends of the Earth Africa
17. Isipingo Ratepayers' Association (Shad Nowbuth)
18. Earthlife Africa, Namibia
19. Biowatch South Africa (Rose Williams)
20. Geosphere (Philip Owen)
21. Eco Doc Africa (Liane Greef)
22. Sustaining the Wildcoast (Sandy Heather)
23. South Durban Community Environmental Alliance (SDCEA) Desmond D'Sa
24. Anglican Church of Southern Africa (the Revd Sue Britton)
25. Groundwork (Bobby Peak)
26. [Ndima Community Services](#)

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<sup>1</sup> [http://www.panna.org/sites/default/files/GMOBriefFINAL\\_2.pdf](http://www.panna.org/sites/default/files/GMOBriefFINAL_2.pdf)

<sup>2</sup> Guirion-Sherman, D (2009). **Failure to yield Evaluating the performance of genetically modified crops.** Union of Concerned Scientists.

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<sup>3</sup> <http://www.namc.co.za/dnn/LinkClick.aspx?fileticket=yq5iMw-Xo2g%3d&tabid=73&mid=649>

<sup>4</sup> James, Clive. 2011. Global Status of Commercialized Biotech/GM Crops: 2011. *ISAAA Brief No.*

43. ISAAA: Ithaca, NY.

<sup>5</sup> Benbrook, C (2009). **Impacts of genetically engineered crops on pesticide use in the United States: The first thirteen years.** <http://www.organic-center.org/reportfiles/GE13YearsReport.pdf>

<sup>6</sup> <http://aspta.org.br/campanha/transgenic-crops-push-up-pesticide-sales/>

<sup>7</sup> ACB (2012). **How much glyphosate is on your dinner plate? SA's food safety compromised by lack of testing.**

<sup>8</sup> SANBI (2011). **Monitoring the environmental impacts of GM maize in South Africa: The outcomes of the South Africa Norway biosafety co-operation project (2008 – 2010)** <http://www.sanbi.org/sites/default/files/documents/documents/sanbimaizereportlr.pdf>

<sup>9</sup> **Plant refuge areas or be denied Bt technology.** Annelie Coleman, Farmers Weekly. 23rd March, 2012.

<sup>10</sup> [http://www.ucsusa.org/assets/documents/food\\_and\\_agriculture/high-and-dry-report.pdf](http://www.ucsusa.org/assets/documents/food_and_agriculture/high-and-dry-report.pdf)

<sup>11</sup> <http://www.ncdc.noaa.gov/sotc/drought/>

<sup>12</sup> Union of Concerned scientists, "High and Dry" (page 2)

[http://www.ucsusa.org/assets/documents/food\\_and\\_agriculture/high-and-dry-report.pdf](http://www.ucsusa.org/assets/documents/food_and_agriculture/high-and-dry-report.pdf)