



PARLIAMENT
OF THE REPUBLIC OF SOUTH AFRICA

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APPEAL TO THE HUMAN RIGHTS COMMISSION OF SOUTH AFRICA
TO INVESTIGATE AND REPORT ON THE OBSERVANCE OF HUMAN RIGHTS
IN TERMS OF GENETICALLY MODIFIED FOOD INGESTION
AND THE ASSOCIATED ENVIRONMENTAL AND HUMAN HEALTH RISKS
INVOLVED IN THE PRODUCTION THEREOF

16 September 2016

Adv Mabedle Lawrence Mushwana
Chairperson: South African Human Rights Commission

Commissioners of the South African Human Rights Commission

Ms Lindiwe Khumalo
CEO: South African Human Rights Commission
Braampark Forum 3
33 Hoofd Street
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via email jhollenbach@sahrc.org.za

RE: URGENT REQUEST TO THE SOUTH AFRICAN HUMAN RIGHTS COMMISSION TO INVESTIGATE AND REPORT ON THE OBSERVANCE OF HUMAN RIGHTS IN TERMS OF GENETICALLY MODIFIED FOOD INGESTION AND THE ASSOCIATED ENVIRONMENTAL AND HUMAN HEALTH RISKS INVOLVED IN THE PRODUCTION THEREOF;

AND, UNFETTERED USE OF A 'PROBABLE HUMAN CARCINOGEN' GLYPHOSATE (A GMO-ASSOCIATED HERBICIDE) FOR CROP-SPRAYING AS PART OF THE LARGELY UNCONTROLLED CULTIVATION OF GENETICALLY MODIFIED ORGANISMS (GMOs) IN SOUTH AFRICAN FOOD STAPLES SUCH AS MAIZE, WITHOUT DUE REGARD TO HUMAN HEALTH AND SAFETY OR CONSIDERATION OF NEGATIVE ECOLOGICAL IMPACTS;

AND, ALLEGED REFUSAL BY THE DEPARTMENT OF AGRICULTURE, FORESTRY AND FISHERIES (DAFF) TO PROPERLY INVESTIGATE AND/OR TRANSPARENTLY REPORT ON THE INCREASING USE OF GENETICALLY-MODIFIED ORGANISMS (GMOs) IN SOUTH AFRICA'S STAPLE FOOD SUPPLY;

AND, ALLEGED REFUSAL BY DAFF TO TAKE COGNISANCE OF THE GROWING INTERNATIONAL CONCERN ABOUT GMOs AS HUMAN FOOD SOURCES AND THEIR POSSIBLE LONG TERM NEGATIVE IMPACTS ON HUMAN HEALTH AND THE LOSS OF INTEGRITY OF OUR HERITAGE FOOD CROPS THROUGH TRANS-GENETIC CONTAMINATION;

AND THE USE BY GMO PRODUCERS OF CROP SPECIFIC HERBICIDES AND PESTICIDES, SHOWN BY RECENT RESEARCH TO BE 'PROBABLE HUMAN CARCINOGENS', WITHOUT DUE LABELLING OF GM PRODUCTS TO WARN CONSUMERS OF THIS HEALTH THREAT.

Dear Advocate Mushwana and Ms Khumalo

We, the undersigned public representatives, most strongly feel the need to impress upon you the very serious nature of these matters.

Given that, to date, there has been no action by any duly authorised person or Chapter 9 institution on these matters, we most urgently appeal to your honourable offices to move with great speed to prevent the likely perpetration of further or greater harm on many people.

Previous lack of response from the Public Protector

Having previously corresponded with the office of the Public Protector on three occasions (December 2015, February 2016 and June 2016), that office having yet to determine its authority with regards to our request for an urgent investigation into the use of genetically modified organisms in the South African agricultural sector, plus the indiscriminate use of the associated toxic, 'probably carcinogenic' herbicides, hereby plead for your involvement in dealing with these unfolding and extremely concerning likely human rights violations.

An urgent letter dated 8th December 2015 to the Public Protector's office regarding the possible attendant and emergent risks to human, animal and eco-system health, as well as to long-term food security, of the prevalence of GMOs as staple crops (white maize being the best and most compelling example) in South Africa, pointed specifically to the recent findings by the World Health Organisation (WHO) sub-agency, the **International Agency for Research on Cancer (IARC)**, which found **glyphosate was a 'probable human carcinogen'**.

Following our initial letter in this regard to the Office of the Public Protector of December 2015, the Public Protector wrote in response on the 14th of December advising that her office would establish whether the law allows the Public Protector to investigate this matter. She indicated that once this process was completed, they would revert and advise accordingly.

Having heard nothing further, on 19th February 2016 the Public Protector's office was reminded of the correspondence and an enquiry was made as to whether a determination had yet been made on whether this falls within the scope of investigation

of the Public Protector. We noted this matter had taken on added significance as the **Environmental Protection Agency in California** had just taken the decision to list glyphosate as a **known cancer-causing agent**, a step which had already been taken by the **World Health Organization**.

No response was received.

Thus, on the 7th of June 2016, the Public Protector's office was again reminded that a response was outstanding the correspondence, at that time, also noted that the **European Union had recently refused** to renew Monsanto's long-term license for its flagship product known as Roundup, containing glyphosate, again adding further significance to the matter.

Had we been waiting for the outcome of an investigation by the Public Protector, we would be inclined to say that more time is needed. However, we are simply waiting on the outcome of a determination as to whether this falls within the scope of what the Public Protector may investigate. With that in mind, the delay in response has certainly been inordinately protracted.

Hence we now call upon the Commissioner and in turn the Commission to carry out an impartial and independent review of research, with a view to investigate and report on the observance, and possible violation, of human rights, and take steps to secure appropriate redress where human rights may in fact have been violated concerning food, water, health and the environment, with regards to the continuing and largely unfettered licensing of genetically-modified organisms in the South African agricultural sector, plus the continued indiscriminate use of associated toxic, 'probably carcinogenic' or 'known carcinogenic' herbicides.

We have listed below the relevant information and research regarding the emergence of glyphosate as one of the most prolific but potentially lethal herbicides sprayed in vast quantities over South African soil and staple food sources.

Risks associated with Glyphosate use

Glyphosate is available across the counter in hardware stores, supermarkets and agricultural sector suppliers.

When challenged on allowing the use of this increasingly questionable substance, glyphosate, which is a broad-spectrum herbicide to which certain GMO crops are specifically engineered to be immune, the Department of Agriculture, Forestry & Fisheries (DAFF) has pointed to now-outdated research from several years ago, which was funded by GMO industry bodies, that showed glyphosate to allegedly be 'safe' for use in crops grown for human consumption.

The very recent EU health and agricultural secretariat's decision to allow only a limited relicensing of glyphosate use in EU countries indicates a sea of change in the EU with regard to the supposed 'safety' of this key component in GMO food production.

To date SA's DAFF has closely followed the EU with respect to GMOs and their associated production practices, specifically so with regards the use of glyphosate.

The DAFF has not, in our view, adequately responded to developments among other regulators abroad, nor to the latest independent scientific research and findings regarding both GMOs as a whole and glyphosate in specific.

Instead, our domestic agricultural authorities have simply pushed aside growing concerns over the use of glyphosate, almost without any restrictions at all, in a variety of scenarios ranging from industrial-scale agricultural production, through to smaller-scale food production and domestic use in home gardens.

The determination late last year by the WHO sub-agency, the International Agency for Research on Cancer (IARC), that glyphosate was a 'probable human carcinogen' has not been adequately refuted, and would therefore appear irrefutable, by the GM Biotech industry and its lobbyists, despite their obvious unhappiness with this finding.

The recent EU decision to relicense glyphosate for just 18 months, as opposed to the standard 15 years, while the IARC finding is further investigated, indicates that glyphosate will likely soon be banned in the EU completely. Meanwhile, however, its prolific use in South Africa continues unabated.

Should glyphosate be proven to be a human carcinogen, as seems almost certain, the official allowance of this substance in a variety of contexts may subsequently be deemed to have been a 'crime against humanity' and/or a 'gross violation of human rights', since it is knowingly being used in a manner bound to cause extensive harm, injury, possible birth defects and even death.

Given proof pending of glyphosate's role as a human carcinogen, the above-described harm would extend to the entire population of South African consumers who eat foods grown using glyphosate or even foods grown near such glyphosate-resistant crops, or downstream or downwind from them.

At greatest risk are farmworkers exposed to glyphosate in the maize, soya, viticulture, sugarcane and timber industries. The National Institute of Occupational Health is in the process of designing a study to look at incidence of Non-hodgkins lymphoma in relation to exposure to glyphosate in South Africa's maize production. This and pretty much all other research related to the real-world use of glyphosate is completely lacking. We currently rely on industry-funded research that appears intentionally limited in scope and the word of the producers of glyphosate that their product is not harmful.

Agricultural application risks

When glyphosate is used in aerial crop spraying it is self-evident that there can be no meaningful control of where exactly this herbicide lands. Wind-drift and mechanical redistribution of this dangerous herbicide cannot be avoided so people, crops and animals with absolutely no connection to food production are directly at risk.

Surely this must constitute a direct violation of our Constitutionally-entrenched rights to health, a clean environment and good governance.

There can hardly be a sensible argument against this point as wind-blown aerial spraying has long been established to be the main cause for secondary contamination of non-target crops, neighbouring eco-systems, human beings and livestock.

There is simply no way that aerial and or mechanical spraying can be contained and controlled such that it only affects targeted crops or plantations.

We contend crop spraying with glyphosate, as described, is in itself a human rights violation, how much more so when, in effect, every single South African is being exposed to this dangerous herbicide, either directly or indirectly, through residues left on GMO foods (often mixed without labelling or warning with non-GMO foods) or via cross-contamination, which is almost unavoidable through food processing.

Ingestion risks

That glyphosate is posing an ever-growing risk to ordinary citizens, regardless of who they may be, and specifically to the great majority of our people who routinely eat white maize meal, 99% of which now consists either entirely of or contains a high percentage of GMOs, is clear from the fact that this poison has been found in human urine, blood samples, breast milk and umbilical cords in communities where GMO foods are produced overseas.

No country on earth has a higher percentage of GMOs in their staple diets than South Africa, we are the only country in the world that has approved the genetic modification of our staple foods, most of which are grown using glyphosate.

It follows, then, that every South African citizen, virtually to the last man, woman or child, is at risk from this product, labelled by leading global health authorities to be at least a 'probable human carcinogen' and more than likely, a 'known human carcinogen'. It also has other seriously harmful effects, including being an endocrine disruptor, with far-reaching health implications for individuals so affected by it.

It is unimaginable, then, that anyone in a government position could condone the use of this (or any other) highly questionable herbicide, either in agro-industry as a whole, or for domestic use, without having thoroughly reviewed all relevant independent research.

What possible justification, we ask, could be offered for what appears to be gross negligence in ignoring the risks associated with the use of glyphosate in the contexts we have described in GMO production?

Please consider: it takes a great deal for an organisation like the WHO to call a widely used and powerfully backed substance such as glyphosate a 'probable human carcinogen'.

That the EU is now firmly on course to ban this substance altogether shows just how far behind the DAFF remains in its review of available research, when it comes to the growing global realisation that glyphosate and, indeed, GMO production itself – are highly questionable, and much more likely than not, to be profoundly problematic for human, animal and ecological health over the long term.

Which person or persons, we would like to know, can honestly justify the use of this substance in the manner and for the purposes described in this letter, when the risks attached are so evident?

Even if glyphosate is argued to be ‘relatively benign’ compared to some other herbicides, the question is whether it is justified for us to be doing any spraying of any kind using this substance if that means that lives, livestock and our critically important ecosystems are also under threat.

It is worth bearing in mind that, short of hand-held application, virtually all glyphosate applications involve either aerial spraying from aircraft or, at the least, the launching of this herbicide into the air from ground-based vehicles, precisely to cover as much terrain as possible and thereby to eradicate any competing plant organisms so as to enhance crop yields.

With DAFF seemingly turning a blind eye and deaf ear to what we and others have been saying about the full spectrum of risks regarding the inclusion of GMOs and their related chemical industry products into the local agricultural sector, the continued approval of glyphosate would appear a human rights violation that deserves the harshest criticism for its lack of humanity and disregard for the safety and food security of not only many of South Africa’s most impoverished and vulnerable people, but of all the citizens of the country as a whole.

Indeed, as we have already pointed out, should glyphosate, as seems increasingly likely, be proven by global health authorities to be a human carcinogen, South Africa and its officials who are overseeing its continued use in whatsoever context may find themselves in due course accused of gross human rights violations, even perhaps crimes against humanity.

One cannot go about simply applying toxic and potentially deadly substances as one pleases, regardless of the reasoning behind it.

And the risk-reward analysis involved in the use of glyphosate or any potentially problematic or carcinogenic substance comes down heavily against glyphosate in our minds and those of a growing body of reliable scientists and researchers (see references below for details).

Constitutional risks

Therefore, it is our most earnestly held view that no government can legitimately condone the use of this substance with the current available research proving its

hazardous effects, especially where such a country's citizens enjoy the protection of hard-won Constitutional Human Rights and Freedoms.

To potentially condemn the great majority of South Africans, whether they know it or not, to probable severe ill effects and possibly lethal cancer from this substance on less than firm legal and scientific grounds seems to us to be not only veering towards wilful 'herbicide homicide' but even, given the numbers of people likely to be affected, 'herbicide genocide'.

The actions we are asking you to investigate urgently, and to stop, are the sorts of things we expected under the old apartheid regime where human lives, especially black ones, counted for less than the imperative to keep 'law and order' and not question the 'powers that be'.

Your honourable office exists precisely to protect those human rights enshrined in our Constitution, considered widely as one of the best in the world. A determination by the Human Rights Commission against glyphosate on human rights violation grounds would go a long way to enhancing the overall role of Chapter 9 institutions, thereby entrenching democratic values in this country, and provide regulatory 'muscle' to the excellent skeletal framework that is our Constitution.

We implore you, as representatives of the SA Human Rights Commission, and thereby as protectors of our collective rights as human beings living in post-apartheid South Africa, to step into the breach and deal with this matter as a clear violation of each and every citizen's right not to be poisoned and not to have their health compromised, perhaps unto death itself, by foreign-owned corporate entities interested primarily, perhaps exclusively, in their bottom-line profits and in turn their share prices.

This situation is, we contend, tantamount to neo-colonialism of the worst and most insidiously dangerous kind; the kind that affects the safety of the very food that virtually every South African, young or old, consumes.

Previous letter to the Public Protector

Due to the lack of response from the office of the Public protector, following our numerous correspondences, we hereby include extracts from the first letter on this matter to the Public Protector, each of the points including references to relevant research articles, originally contained in our letter dated 8 December, 2016, for the sake of conformity:

"We, the undersigned public representatives and concerned parties, having exhausted all other means of redress on a matter of significant, even urgent and overwhelming national priority, wish hereby to bring to your attention matters concerning the governance of South Africa's critical food supply which we believe and know to be vital to the long-term health of our people.

The situation which we are now requesting – indeed, we are pleading, for the sake of our people – that you and your agency investigate is the Department of Agriculture,

Forestry & Fisheries' apparent wilful refusal to be open, forthcoming and transparent in its dealings with a few very large and powerful multinational companies, among them Monsanto, who have been given the green light to market their genetically modified (GM) crops, and associated herbicides, pesticides and fungicides, almost without constraint, in South Africa.

Month by month, the DAFF has been granting Monsanto and others the right to sell seeds in South Africa which are banned in many parts of the world, including in countries with far more capacity and sophisticated analysis resources in their respective departments of agriculture and health than are enjoyed by South Africa's equivalent government departments.

Opponents of GMOs being grown and sold in South Africa have been vocal, but essentially their complaints have been routinely dismissed or ignored by the DAFF.

Furthermore, public participation in the GMO decision making process in South Africa is compromised by inadequate public notice systems and onerous procedures around accessing information. For example, access to safety data submitted by applicants is not made available to the public. Applicants may decide what is 'confidential business information' and redact it. The public is therefore receiving severely redacted safety data making it impossible to give independent analysis of the science.

All decision-making should be based on peer-reviewed science that is in the public domain, instead authorities are relying on industry studies that interested parties and the public are not able to access.

Furthermore, are denied access to the names of members sitting on the GMO Advisory Council. We have no way of knowing if the necessary relevant expertise is represented in that body or if there are serious conflicts of interest.

The medium-to-long-term effects of GM crops are not yet known, but increasingly, with ever-more studies emerging on the use of GMOs worldwide, it is becoming clear that there are likely to be negative effects which, once fully manifest, may prove to be far too late to do anything about.

In part, this is because there is literally nothing which can be done to stop some degree of cross-pollination between GM crops and non-GM crops where these are grown side-by-side or even at some distance but where there is airborne or other transmission of the GM pollens to the non-GM crops.

Furthermore, some effects of GMOs (and their related products) may take years to reveal themselves, possibly as widespread allergies and other more serious conditions including cancers, whereas most of the testing of the effects of GMOs has been industry paid-for studies, conducted on rats usually and mostly for not more than 90 days.

The longer-term effects of GMOs, published in the peer-reviewed journal Food & Chemical Toxicology in 2012, and conducted by The Committee for Research &

Independent Information on Genetic Engineering (CRIIGEN), reported the results of two-year feeding studies on laboratory rats fed a diet of Monsanto's glyphosate tolerant GM maize variety (NK603) treated with Monsanto's glyphosate-based 'Roundup' herbicide (to simulate the presence of Roundup residues found in GM maize). Overall, rats fed GM maize developed more tumours at a faster rate than rats fed a non-GM control diet. (NB. This research was retracted by The Food & Chemical Toxicology journal but was again published by Environmental Sciences Europe in 2014.)

Only 90-day feeding trials were ever conducted and reported on by the industry (Monsanto) on this product. Many negative effects were shown up in the two-year trials, all associated with the GM food itself or with Roundup alone or with both the food and Roundup. Most alarmingly, the studies showed increased and more rapid mortality (deaths) coupled with hormonal non-linear and sex-related effects on the test animals.

We are advised that the industry (Monsanto) has since tried to quash these devastating findings by attempting to throw doubt on the results by a variety of means. In the interim however, we are further advised that studies have emerged under-scoring likely long-term effects on higher-order animals (including, obviously, humans) of the negative impacts of GMOs and their associate weed and pest-control toxins.

Despite this, South Africa's DAFF continues to rely on industry-conducted research that finds GM crops and their associated herbicides present no long term risk to human health or the environment. In other words, what should be extended testing in laboratories is being circumvented by our DAFF, which is not conducting the necessary due diligence on the safety or otherwise of these products for human and animal health, and on their long-term impact on the wider eco-systems into which they and their support products (herbicides, pesticides and fungicides like Roundup) are being introduced.

Despite numerous approaches by concerned elected officials, civil society groups who are deeply worried about the problem, and by individuals who are concerned about their own and their fellow South Africans' health being negatively affected through official negligence or worse, the DAFF simply declines to engage meaningfully on this essential aspect of modern life.

To further substantiate our position and our concerns about the widespread use of GMOs in the SA food chain (bearing in mind that the food industry itself admits that nearly all South Africa-grown white maize, as used regularly in maize-meal 'pap' by upwards of at least 80% of the population) we supply you herewith the following, the majority of points with live links and references to underpin statements, allegations and findings therein referred to.

- **GMOs have been banned** in Austria, Bulgaria, Germany, Greece, Hungary, Ireland, Japan, Luxembourg, Madeira, New Zealand, Peru, South Australia, Russia, France, Scotland and Switzerland for very good reason following extensive research into the matter.

- In almost every case, among other considerations raised by relevant health, environment and agricultural departments of these named countries, the issues of the **potential harm** of the combination of **exogenic** (external genes from other sources than the food crop in question) foods and the use of **crop-specific weed-control treatments such as Roundup (using glyphosate, re-classified as a ‘probable human carcinogen by the World Health Organisation)** have been cited as reasons for the bans in these countries on GM crops.
- Many country **bans have been on both local cultivation of GM crops and their import in whole or as part of other products.**
- While the use of a single pest-control substance on GM-adapted crops serves mass production of food, and the argument is thus made by GM industry proponents that this is good for food security, the UN itself has found otherwise and has called for an end to ‘Industrialised Farming’ stating the world’s agricultural needs can be met much more cost-effectively and safely with localised organic farms. <https://www.organicconsumers.org/news/united-nations-calls-end-industrialized-farming>.
- **Pesticide use (especially glyphosate) is soaring** contrary to industry claims that GMOs reduce pesticide use. (A pesticide includes herbicides, insecticides, fungicides, seed treatments, nematicides, fumigants etc). For example, the use of glyphosate in maize production in South Africa increased more than 5 fold between 2006 and 2012. <http://www.africabio.com/value-of-glyphosate-in-sa-agriculture/>
- GMO plants are engineered for two traits: a) To **tolerate a particular herbicide** (glyphosate is the prime example) thereby providing **herbicide tolerance (HT)** in the target crop; and b) **To induce the plants to produce their own toxin which kills a particular insect (Bt).**
- Most GM crops have embedded traits designed to curb pest/weed inroads into crops yields through herbicide resistance and plant-produced pesticides. But **overuse, continued use and misuse of herbicides/pesticides** (like glyphosate) **causes pests to build resistance** to such herbicides/pesticides. This results in **farmers using more pesticides or, worse yet, cocktails of older, more harmful pesticides.** This process creates a cycle of diminishing crops yields against a backdrop of increasing toxin usage. “Field-evolved resistance by western corn rootworm to multiple *Bacillus thuringiensis* toxins in transgenic maize” by Aaron J Gassmann et al, Department of Entomology, Iowa State University, published and peer-reviewed in the PNAS Journal. (Western Corn Rootworm resistant to multiple traits): <http://beyondpesticides.org/PNAS-2014-Gassmann-1317179111.pdf>
- There have been at least three major reports from the African Centre for Biodiversity (ACB) on the GMO and related pesticide issues in South Africa. <http://acbio.org.za/tag/glyphosate>

- A growing number of leading scientists and researchers that disagree with industry claims that GMOs are safe for environment, animals or humans. **Open Letter from World Scientists to All Governments Concerning Genetically Modified Organisms (GMOs)** signed by 815 scientists: <http://www.issis.org.uk/list.php>
- The **International Agency for Research on Cancer (IARC)**, a branch of the World Health Organization, has repeatedly **classified glyphosate as a Group 2a “Probable Human Carcinogenic”**. <http://www.iarc.fr/en/media-centre/iarcnews/pdf/MonographVolume112.pdf>; <http://monographs.iarc.fr/>; <http://monographs.iarc.fr/ENG/Monographs/vol112/index.php>
- The statement by SA’s **DAFF, dismissing the above-mentioned IARC/WHO findings**, may be found at: <http://stockfarmafrica.co.za/daff-responds-on-glyphosate-carcinogen-classification/>. This statement either willfully or negligently avoids accounting for some of the latest and most damning research relevant to the department’s position.
- It should be noted that most of the governments that have banned GMOs, along with some others, have **taken actions to limit glyphosate use** in their own countries.
- There is also the **emergent issue of unintended consequences of GMO food production**. “Unintended compositional changes in transgenic rice seeds” peer-reviewed study by Jiao Z1, Si XX, Li GK, Zhang ZM, Xu XP, published in NCBI, National Institute of Health (GM rice not ‘substantially equivalent’) <http://www.ncbi.nlm.nih.gov/pubmed/20050687>
- It has been argued that GM crops can increase crop yields and increase farmer incomes through reductions in crop losses. Maize yields in South Africa have risen since the introduction of GM varieties, but this has occurred as maize cultivation has shifted to areas of higher agronomic potential and a more than doubling of the maize area under irrigation. Coupled with continued improvements in conventional breeding and farming techniques, it is extremely difficult to extrapolate the contribution of GM seeds in these yield increases. However, even increasing yields will not alter the underlying structural issues in South Africa’s economy, where it is estimated that one in four people are at risk of going hungry: <https://www.oxfam.org/en/research/hidden-hunger-south-africa>
- To illustrate the point that the issues with GMO production are not unique to South Africa, but central and irreducibly part of the **greater GMO problem**, it may be pointed out that the production of GMOs has been undertaken intensively in the USA for some two decades, yet 17 million American children struggle with food insecurity. One in four children there lives without consistent access to enough nutritious food to live a healthy life. <http://www.feedingamericaky.org/truth-about-hunger/nationwide-statistics>

- **The argument that GMO production is vital for global food security and adequate production is entirely fallacious.** At present, the world produces enough food to feed everyone, not counting GM crops. About 50% of this production is wasted, including the resources used to produce it.
<http://www.theguardian.com/environment/2013/jan/10/half-world-food-waste>
- Also undermining the GM-industry argument in favour of what it calls the necessity for GM food production is the fact that **GM commodity mono-crops are used mostly for biofuels and livestock feed, not food:**
<https://www.facebook.com/GMOFreeUSA/photos/pb.402058139834655.-2207520000.1438555127./1032192856821177/?type=3&theater>; and (USDA Report): <http://www.scientificamerican.com/article/time-to-rethink-corn/>
- Further to the point that GM food production in SA has done nothing to alleviate the plight of the most needy, is the fact that **malnutrition contributes to some 64% of all deaths of South African children under the age of 5:**
http://www.iol.co.za/news/south-africa/western-cape/hunger-claims-64-of-sa-children-1.1858022?utm_source=dlvr.it&utm_medium=facebook
- It is pertinent to note that the **global industrial food system** (excluding, obviously, local subsistence farming) is **controlled by a handful of major corporations, of which Monsanto is the leading player with regards to GMOs.** These four corporations control 58.2% of seeds; 61.9% of agrochemicals; 24.3% of fertilizers; 53.4% of animal pharmaceuticals; and, in livestock genetics, 97% of poultry and two-thirds of swine and cattle research. The biggest six multinationals (including the four cited above) control 75% of all private sector plant breeding research; 60% of the commercial seed market & 76% of global agrochemical sales.
http://www.etcgroup.org/putting_the_cartel_before_the_horse_2013
- **Industrial Food Chain vs The Peasant Food Web – Biodiversity Under Threat:** Peasants (subsistence farmers) feed 70% of the world population using 30% of the world's resources. Peasants breed and nurture 40 livestock species and 8,000 breeds. Peasants breed 5,000 domesticated crops and have donated more than 1.9 million plant varieties to the world's heritage crop gene banks. Peasant fishers harvest and protect more than 15,000 freshwater species. The work of peasants and pastoralists in maintaining soil fertility has been calculated by researchers to be 18 times more valuable than the synthetic fertilizers provided by the seven largest agro-corporations. In contrast, the industrial food chain feeds 30% of the world's population using 70% of the resources and focuses on far fewer than 100 breeds of five livestock species. Corporate plant breeders work with 150 crops but focus on barely a dozen. These crops, including GM varieties, only yield under optimum conditions, with low resilience in adverse conditions. Despite claims by the GM industry that they have produced drought-resistant trans-gene varieties of staple crops like maize, studies have shown that many naturally-occurring indigenous varieties have been developed without gene-slicing to be at least as drought-resistant as GM

versions, often more so. Industry prizes uniformity over diversity as this is the quickest way to optimise profits, but without consideration to the loss of food crop seed diversity, animal and livestock diversity, as well as related elements requisite for security of our eco-systems and long-term food security through diversity.

http://www.etcgroup.org/sites/www.etcgroup.org/files/ETC_Who_Will_Feed_Us.pdf

- **The GM-industry argument that GM production in SA is vital to assist emergent farmers and small-holders is also entirely fallacious.** Research conducted recently in the Eastern Cape into the use of GM maize varieties among small-scale farmers concluded that, “current Bt maize varieties in South Africa are expensive, are not suited to planting in suboptimal agricultural environments and come with regulations that smallholders do not understand or with which they do not agree. Whilst some of these problems can be remedied, there are cheaper alternatives available that are more attuned both to smallholders’ agro-ecologies and to their farming practices.”
- Fischer K, Van den Berg J, Mutengwa C. South African Journal of Science, 2015:
http://www.sajs.co.za/sites/default/files/publications/pdf/Fischer_Commentary.pdf
- **The International Assessment of Agricultural Knowledge, Science and Technology for Development has issued a report recommending agro-ecology as the way forward in agriculture internationally, without the use of GM crops.** The International Assessment of Agricultural Knowledge, Science and Technology for Development (IAASTD) is a unique international effort that evaluates the relevance, quality and effectiveness of agricultural knowledge, science, and technology (AKST); and effectiveness of public and private sector policies as well as institutional arrangements in relation to AKST. The question posed was: ‘How can we reduce hunger and poverty, improve rural livelihoods, and facilitate equitable, environmentally, socially and economically sustainable development through the generation, access to, and use of agricultural knowledge, science and technology?’ The IAASTD was a three-year collaborative effort (2005-2007). The project is a major global initiative, developed out of a consultative process involving 900 participants and 110 countries from all regions of the world.
The IAASTD was launched as an intergovernmental process, with a multi-stakeholder bureau, under the co-sponsorship of the FAO, GEF, UNDP, UNEP, UNESCO, the World Bank and WHO.
<http://www.unep.org/dewa/Assessments/Ecosystems/IAASTD/tabid/105853/Default.aspx/>
Summary: http://www.ifoam.bio/sites/default/files/page/files/unctad_and_unep.pdf
- **Despite GM-industry denials, there are a growing number of studies showing unintended nutritional changes, allergic reactions and toxic effects in lab animals (mostly rats) on which longer than industry-standard 90-day test trials have been conducted.**

<http://earthopensource.org/gmomysandtruths/sample-page/3-health-hazards-gm-foods/3-1-myth-gm-foods-safe-eat/>

- **Despite GM-industry claims, co-existence between non-GM and GM crops is impossible.** A leading example is that of GM rapeseed contamination in Switzerland, where it is banned, as shown in a peer-reviewed and published study: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4252112/>
- **Another example of non-GM crop contamination is that of wheat:** (NB. Many believe that the wheat on the market is genetically modified but this has not been approved anywhere in the world. This contamination came through field trials and is a stark warning about how easily experimental and unapproved crops can end up in our food chain.)
<http://www.soilassociation.org/news/newsstory/articleid/7510/monsanto-pays-out-millions-for-gm-wheat-contamination>
- Not yet addressed in issues around GM crop production raised with DAFF (unanswered to date) is that of **Biopiracy which some major GM producers are being accused of:** <http://www.dw.com/en/biopiracy-rips-off-native-medical-knowledge/a-16732044>; and http://www.theecologist.org/News/news_analysis/2799927/grabbing_africas_seeds_usaid_eu_and_gates_foundation_back_agribusiness_seed_takeover.html
- Another issue raised by GM crop production is that of **alleged Land Grabs by GM companies based on alleged ‘copyright’ violations subsequent to pollen drift and related biomechanical transmission of trade-marked GM seed pollens into non-GM neighbouring crops.** There is also a wider concern around a broader effort by GM industry players to obtain as much land in Africa at this time as is possible, all earmarked for GM crop production.
<https://www.grain.org/article/entries/4663-the-g8-and-land-grabs-in-africa>
- **The Golden Rice Scandal**, as it has been dubbed, deserves to be included as being among those concerns raised to date about the implications for any country’s core staple crops once GM versions are introduced, and how GM industry advocates carry out their field tests:
<http://gmwatch.org/news/archive/2014/15536>
- The issue of pesticides used specifically with GM crops has been addressed in the following articles: **PESTICIDE USE ON GENETICALLY ENGINEERED CROPS** Ramon J. Seidler, Ph.D. Former Senior Scientist at the Environmental Protection Agency, Office of Research and Development, Western Ecology Division in Corvallis OR September 2014:
http://static.ewg.org/agmag/pdfs/pesticide_use_on_genetically_engineered_crops.pdf
- **International Survey of Glyphosate Resistant Weeds (32)** – Survey by the Weed Science Society of America (A collaboration between weed scientists to monitor the evolution of herbicide-resistant weeds and assess their impact worldwide). <http://weedscience.org/summary/moa.aspx?MOAID=12>

- **“Plant Incorporated Pesticides (PIPs) - Insecticides Incorporated GE Crops”** – Beyond Pesticides examines the rise of insects developing resistance to GM Bt Crops.
<http://www.beyondpesticides.org/gmos/Plant-IncorporatedProtectants.php>
- **“Dominant Inheritance of Field-Evolved Resistance to Bt Corn in *Busseola fusca*”** – by Campagne P, Kruger M, Pasquet R, Le Ru B, Van den Berg J (2013), published and peer-reviewed in Plos One Journal (The African Stalk Borer, a major pest, has developed resistance to Bt Maize as a dominant trait): This study showed that scientist were working with wrong assumptions about these pests for several decades! This technology has come onto the market long before scientists have understood the complex impacts and this is precisely why the International Biosafety Protocol is based on the “precautionary principle”. South Africa is a signatory to this Protocol and has both the obligation and the right to halt GM tech in the face of uncertainty regarding safety.
<https://en.ird.fr/layout/set/popup/the-media-centre/scientific-newsheets/438-african-caterpillars-resistant-to-gm-maize>
- In terms of failure to conform to Constitutionally-required transparency and equality, the **DAFF has no apparent answer to critics who say that the department is allowing GM crops to be consumed by the largest percentage of the population, without consultation or even that population’s overt knowledge.** “FOOD FASCISM IN SOUTH AFRICA: TIGER BRANDS, PIONEER AND PREMIER FORCE FEEDING THE NATION RISKY GM MAIZE”. Press Release on test results of Maize Meal by African Centre for Biodiversity – “The majority of South Africans are not only eating GM maize without their knowledge and consent but have no choice or alternative whatsoever” – Mariam Mayet, ACB:
http://acbio.org.za/wp-content/uploads/2015/02/GM-Maize_-Press_-Release-Oct20131.pdf
- **The African Centre for Biodiversity has repeatedly detailed scientifically-sound research and work illustrating various risk components to GM food production**, including: “Glyphosate in SA” – Part 2 in the Pesticide and GMO Crop Series – by African Centre for Biodiversity. In this article, the ACB points to, inter alia, environmental impacts, outdated and/or inadequate pesticide laws, few assessments, lack of regulation and capacity to monitor glyphosate in the SA environment, no maximum residue level in water, no buffer zones to protect non-targets, “polluter pays” principle ignored, constitutional rights to safe environment ignored: <http://acbio.org.za/wp-content/uploads/2015/02/Roundup-Environmental-impacts-SA.pdf>
- **The ACB has also anticipated GM-industry responses to a ban on glyphosate in SA** with the following: “What next after a Ban on Glyphosate – More Toxic Chemicals and GM Crops? – Or the Transformation of Global Food Systems?” Briefing by African Centre for Biodiversity and Third World Network (Glyphosate status, banning glyphosate, plans to adopt more harmful chemicals instead, and the move towards agro-ecology):
<http://acbio.org.za/wp-content/uploads/2015/06/Glyphosate-report-2015.pdf>

- Despite the GM-industry rather shrill denials, **there is no general consensus of the safety or otherwise of GM crops, with a growing number of concerned scientists coming out against uncontrolled GM crop production or any GM production at all, in some cases.** “No Scientific Consensus on GMO Safety” - Statement signed by 313 scientists, physicians, academics, and experts from disciplines relevant to the scientific, legal, social and safety assessment aspects of genetically modified organisms (GMOs) as of 20 January 2015:
<http://www.ensser.org/increasing-public-information/no-scientific-consensus-on-gmo-safety/>

GM crops use carcinogenic pesticides

We wish to emphasise that beyond all prior points made in this appeal for your office to investigate the GMO industry in South Africa, and its ‘confidential’ relationship with the DAFF – to the detriment of ordinary South Africans as we most earnestly believe – there is a compelling factor which we hereby appraise you of, and which we believe compels your office to acknowledge the need for and to undertake such an investigation. This factor comes in the form of unimpeachable research that GM crops are created to be resistant to specific pesticides that have now been shown to be ‘probably carcinogenic’. This fact alone means that GM containing products have to be at the very least clearly labelled so that South African citizens may exercise their Constitutional rights to health and safety when it comes to choosing which foods they eat. Food security must surely include transparency related to both what foods contain, especially processed foods, and what contaminants may be on or in them.

The latest research shows increasing evidence that pesticides and related substances used in GM crop production are likely carcinogens. “In March, 2015, 17 experts from 11 countries met at the International Agency for Research on Cancer (IARC; Lyon, France) to assess the carcinogenicity of the organophosphate pesticides tetrachlorvinphos, parathion, malathion, diazinon, and glyphosate (table). These assessments will be published as volume 112 of the IARC Monographs.”

<http://www.iarc.fr/en/media-centre/iarcnews/pdf/MonographVolume112.pdf>

Article on IARC Classification published in the prestigious Lancet Journal (Register Free to access):

<http://www.thelancet.com/journals/lanonc/article/PIIS1470-2045%2815%2970134-8/abstract>

The 92 pg Monograph No. 112 on Glyphosate issued by the World Health Organisation’s International Agency for Research on Cancer (IARC):

<http://monographs.iarc.fr/ENG/Monographs/vol112/mono112-02.pdf>

The American Cancer Institute updates Glyphosate as a Probable Carcinogen (scroll down to IARC & NTP classifications):

<http://www.cancer.org/cancer/cancercauses/othercarcinogens/generalinformationaboutcarcinogens/known-and-probable-human-carcinogens>

DAFF’s (entirely inadequate) response to IARC 22 May 2015:

<http://www.nda.agric.za/docs/media/Media%20statement%20on%20glyphosate.pdf>

International Journal of Environmental Research and Public Health publication suggests

that Roundup, or glyphosate, becomes highly toxic to the kidney once mixed with “hard” water or metals like cadmium and arsenic. These metals often exist naturally in the soil or are added via the fertilizer:

<https://www.documentcloud.org/documents/1084784-jayasumana-glyphosate-study.html>

The New England Journal of Medicine, considered one of the most influential and credible medical journals in both the United States and internationally, has very recently published an articles citing the use of glyphosate and 2,4-D, also widely used in GM crop production, as respectively, either ‘probable’ or ‘possible’ human carcinogens. In the article, titled “[GMOs, Herbicides, and Public Health](#),” Dr Philip J Landrigan, the Dean for Global Health at Mount Sinai School of Medicine, and co-author Charles Benbrook, a crop and soil scientist, say the time has come for GMO labelling in the USA (and by extension, in other countries that follow US standards in food production closely, including South Africa) where industry lobbyists have so far successfully resisted this move.

A seperate WHO body – the JMPR recently found glyphosate to not be carcinogenic, recent DAFF communications cite this new decision. Again though, there is a huge problem of conflict of interest with the JMPR. One need ask, why is our government conveniently selecting which scientific bodies to concur with? Can it be only those that require them to take no further action rather than to ensure the safety of our citizens?

http://www.testbiotech.org/sites/default/files/Annex_COI_JMPR_final_0.pdf

The following are links to countries that have taken action against Roundup and the reasons behind such decisions:

Bermuda:

<http://www.royalgazette.com/article/20150511/NEWS/150519966>

Denmark:

<http://www.gmwatch.org/news/latest-news/16206-danish-authority-declares-glyphosate-a-carcinogen>

EU - International Doctors Demand Immediate Ban on Glyphosate Herbicides:

<http://feedtheworld.info/doctors-demand-immediate-ban-on-glyphosate-herbicides/>

Sri Lanka:

<http://www.globalresearch.ca/sri-lankas-newly-elected-president-bans-glyphosate-monsanto-roundup-deadly-chronic-kidney-disease-increased-5-fold/5451936>

El Salvador:

<http://sustainablepulse.com/2013/09/19/el-salvador-government-bans-roundup-over-deadly-kidney-disease/>

Argentina - 30,000 doctors call for ban on Glyphosate:

<http://gmwatch.org/news/latest-news/16087-argentina-30-000-doctors-and-health-professionals-demand-ban-on-glyphosate>

Netherlands bans Glyphosate for non-agricultural use:

<http://sustainablepulse.com/2014/04/04/dutch-parliament-bans-glyphosate-herbicides-non-commercial-use/>

France bans Roundup Sales in Garden Centres:

<http://www.cornucopia.org/2015/06/france-bans-roundup-sales-in-garden-centers/>

REWE GROUP Germany removes Glyphosate from their shelves:

<http://www.gmwatch.org/news/latest-news/16157-rewe-group-removes-glyphosate-herbicides-from-its-diy-range>

Switzerland – Migros, Coop and Coop Building & Hobby agro-chemical outlets have started removing Glyphosate already, before the ban:

<http://sustainablepulse.com/2015/06/03/swiss-supermarkets-stop-sales-of-glyphosate-over-health-concerns/#.VW5FdoY8KJl>

Supporting and underlining the points made in these various steps and/or found in numerous research projects (not conducted by GM-industry linked entities) includes the Centre for Biological Diversity which took legal action against the EPA (US Environmental Protection Agency), resulting in a settlement. "The EPA has never completed any endangered species assessments of glyphosate at any point over the lifetime of this chemical on the market":

http://www.biologicaldiversity.org/news/press_releases/2015/pesticides-06-23-2015.html

Other references:

Countries & Regions with Genetically Engineered (GE) Food/Crop Bans

https://www.organicconsumers.org/old_articles/gefood/countrieswithbans.php

What countries have banned GMO crops

<http://www.examiner.com/article/what-countries-have-banned-gmo-crops>

26 Countries ban GMOs. Why won't USA?

<http://www.thenation.com/article/twenty-six-countries-ban-gmos-why-wont-us/>

Many Countries and Localities Ban GMO crops, require GE Food Labels

<http://www.realnatural.org/many-countries-ban-gmo-crops-require-ge-food-labels/>

Conclusion

We the undersigned, being ordinary citizens, elected officials, interested parties and beneficiaries of the inherent protections as enshrined in the South African Constitution, call upon you to act on our behalf and investigate the status of, rationale behind and the implications of the DAFF's determinations to date on the cultivation of GM crops and the use of associated toxic substances, as cited above, to make such cultivation possible.

It has become clear over the past years that the DAFF is operating on an agenda that appears neither open nor open to being questioned by any parties outside of the DAFF. Only court action has so far produced any public provision of alleged support documentation allowing GMOs to be grown in South Africa, and that documentation which has been provided by DAFF to date to support its decisions would appear to have either willfully or negligently misrepresented by the DAFF in terms of animal, human and ecological safety.

This misrepresentation brings into question all determinations by the DAFF up to this point regarding the continuing roll-out of GM food production in South Africa, against a rising backdrop of international scientific concerns over the implications for human, animal and ecological safety, as well as long-term food crop security.

As such, you are our last resort in an effort to head off and/or mitigate against what may well prove be one of the worst set of official determinations ever made by a South African government department with respect to the health of all South Africans, and the safe production of food for its people, as well as the long-term health of the eco-systems on which we all depend.

We therefore request that your offices immediately, independent of any other government department or agency, investigate thoroughly the evidence presented in this letter and any other research that may come to light in the course of your investigations. We strongly suggest you contact government agencies from each country where GMOs and glyphosate have been banned and review the research upon which they based their decisions. Please also contact the African Centre for Biodiversity who may be questioned in terms of this investigation in order to establish the full extent of the risks being run by the population at large.

We appeal to your better judgment in ensuring that any and all research to be reviewed is obtained from reliable sources free of any and all industry bias and strongly recommend that independent international experts (those not receiving payments and/or grants from GMO industry players for their research work) be consulted.

Should your department's investigation reveal substantive risk of harm to GMO consuming South Africans and or to the wider most precious eco-system on which we all rely, then we would most urgently ask you to consider ordering the DAFF to immediately suspend all GM production in South Africa until their safety can be resolutely established.

The Consumer Protection Act under DTI requires all ingredients with 5% GM content or higher to be labelled as 'containing GMOs'. Industry however has stalled the implementation of the regulations for several years. These regulations must be urgently clarified and measures must be taken by government to monitor the entire industry's adherence to the law

We also request that you conduct an investigation with regards to the legislation or regulations as regards the labeling of all GM products, whether domestically produced or imported, whether derived of the GM crops themselves or meat from animals having been fed GM derived foods, such that South African consumers may see and understand for themselves to what extent they are being exposed to GM products.

Even if your investigation should reveal a 'tolerable risk' to the broader South African population, which would appear unlikely, glyphosate-based herbicides, such as Monsanto's Roundup, should be no longer allowed for sale or use in the light of the WHO's finding that it is a probable human carcinogen. (We have included the WHO monograph dated 20th March 2015 marked 'Annex A' for ease of reference).

Similarly parallel products on the treadmill of greater toxic chemical cocktails to deal with the natural process of weed evolution and adaptation such as 2,4-D and Dicamba should likewise be excluded from any form of sale or use in South Africa.

For your own edification we urge you to firstly review the included research paper, marked 'Annex B', entitled **Genetically engineered crops, glyphosate and the deterioration of health in the United States of America**, by Nancy L Swanson, Andre Leu, Jon Abrahamson and Bradley Wallet.

Secondly the Ted Talk presentation by an ex Pro-GMO research scientist Mr Thierry Vrain on this most critical subject. The Ted Talk can be found at the following address: <https://youtu.be/RQkQXyiynYs>.

Juxtaposed to the Public Protector failing to act upon receiving the above appeal, we humbly request that the Human Rights Commission deal with this matter forthwith and on an urgent basis.

Potential alternatives

Seeing as South Africa is so heavily invested in GMO production & glyphosate use we have attached a relevant EU parliamentary letter marked 'Annex C' regarding relicensing of glyphosate. The letter looks beyond the toxicity of the substance and questions the entire notion of an agricultural system based on toxins and make suggestions on how to transition out of this.

Please also consider in your investigations the socio-economic impact of embracing such a large-scale high-tech industrial approach to our staples. South Africa's staple food chain is now utterly monopolised by a handful of corporations. Our maize seed sector is owned by 2 foreign multinationals – Monsanto and Du Pont (Pioneer Hi-bred). The milling, manufacture and distribution are similarly owned by cartels. This system means that our staple food chain is in the hands of a corporate elite while small entrepreneurs are cut out of the chain and left to rather be exploited as low-paid workers in this inequitable industrialised system. This kleptocracy of corporate monopoly and power deserves investigative scrutiny to ensure it passes constitutional muster.

ACB's briefing document on this issue can be found here:

<http://acbio.org.za/wp-content/uploads/2014/12/GM-Maize-Report.pdf>

Service to the people of South Africa

We further call upon you, having scrutinised our evidence, as provided, and any further evidence your researchers uncover, to serve South Africa impartially and independently, in good faith and without fear, favour, bias or prejudice, subject only to the Constitution and the law, to promote respect for human rights and a culture of human rights and thereby cause the relevant authorities, corporations, and other persons so engaged in the perpetual production and use of glyphosate and GMO foods

in a manner not consistent with our inviolate human rights, to cease and desist immediately.

This matter is so serious and potentially irreversibly damaging, that we most strongly put to you, who are our protectors of civil liberties, that it is up to the profiting industry to demonstrate the alleged long term 'safety' of glyphosate and its parallels – if indeed these substances have a 'safe' use – rather than for all South Africans to be, in effect, unwitting and unwilling collective guinea pigs in an uncontrolled 'experiment in the wild' which has no apparent oversight by any relevant authority at this time.

We do this in conjunction with our previous appeals to the Public Protector's office to likewise investigate the intrusion of GMO crops and glyphosate into South Africa in an apparently uncontrolled and risk-filled manner.

All South Africans, of whatever rank and wherever they may be, face an unknown future of increased risk of cancer and other ills every day that glyphosate use is still allowed, in any way and for any reason and by whatever method of application, in this country

For these reasons we believe the honorable Commission is compelled by the onus of your office, by reason and by the common cause of humanity's avoidance of potential harm to many through actions such as we have described, to act meaningfully and swiftly to avert what we most earnestly believe to be an impending disaster which must be ameliorated and ultimately ended.

Yours sincerely,



**PRINCE MANGOSUTHU BUTHELEZI MP
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